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THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

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TERMS—FIFTY CENTS A YEAR.—Ten copies of the CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Five Dollars.

Editorial Correspondence.

Sketches of Cayuga County Farming---V.

The County, as I have already remarked, consists of two distinct regions—the southern being of great uniformity, and possessing a strong fertile loam. The northern part, (or nearly all that part lying north of Auburn,) is broken into ridges running north and south, and consisting of lighter soil, or mostly of a sandy or gravelly loam.* Nearly all the southern part needs underdraining—only a part of the northern requires it, much of the subsoil being gravelly, so that post holes and cellars do not hold water, and cellars need no drainage. There are, however, considerable portions where the water remains in the subsoil, and underdraining becomes necessary for success. More expenditure is required for the complete improvement of the southern soil, but when this is effected, it is the most valuable, as it retains manure much longer, and may be brought up to a higher degree of fertility. Much of the northern part possessing natural drainage, that region generally has proved the more profitable for ordinary farming, before underdraining was adopted. A decided difference is observed between these two kinds of soil, where stone are used for forming the channel. Clayey soil soon forms a solid adhesive mass over the stones, and is comparatively little liable to fall in; the lighter kind easily crumbles or runs, and unless the top is covered with small stones, coarse gravel or small flat stones, the ditch soon becomes useless. Digging three or more feet deep, and filling but a short way up, tends to prevent the earth from sinking among the stones.

I have been unable to visit but few farmers in the northern part of the county, but the few met with have imparted much practical information, which will doubtless prove valuable to many of the readers of this paper.

JOSEPH L. TAYLOR of Mentz, occupies a 100 acre farm, while another of similar size, partly unimproved, a mile distant, is used for pasturage. He has given much attention to rotation of crops. His course is the usual one of corn on sod, plowed just before planting; barley, spring wheat or peas; then winter wheat, seeded down with clover and a small portion of timothy, which remains two years. He prefers the pea crop to all others, to precede wheat—thinks it nearly equal to summer fallow; it loosens the soil like clover. It proves an admirable crop for fattening hogs, by merely softening the peas by soaking. Grinding would doubtless be better. The Marrowfat and Canada pea are preferred, the latter being the best for general purposes, and freer from bugs. He raises usually from 20 to 40 bushels per acre. They are cut with a scythe, not by the usual process of mowing, but by a sort of slitting process, slightly lifting the blade upward, and rolling over the cut mass into portions of about one forkful each. An experienced hand will cut twice as fast as a mower unaccustomed to this crop. On the whole, he regards the pea as the most important and valuable crop to the farmer, and he raises all the peas that his hogs will market for him, for which it is better than old corn. Barley was formerly one of the best crops of the course, but he thinks it has tended to introduce the insect among wheat.

The clover crop he regards as of great importance, being not only valuable in itself, but furnishing manure and tending eminently to loosen the soil. Any one may see its loosening tendency by plowing the sward of two fields, one clover, and the other exclusively timothy—the former will turn over loose and friable; the latter compact and heavy. He finds great advantage in top-dressing the wheat crop at sowing, not only on account of the advantage to the wheat, but for the vigorous growth of the clover. He sows never less than a peck per acre, but finds a peck, as commonly sown, no better than a half peck sown on top-dressed wheat. The only objection to this top-dressing is the scattering of the seeds of weeds, particularly the large mayweed. But this difficulty is obviated by allowing the manure heaps to heat, and by keeping a clean farm. The crop of corn is never destroyed by worms if on clover sod—on timothy that has lain several years, it is badly injured. To prevent this injury by worms in such cases, it is the practice of JOHN C. DIXON of the same town, to sow oats first; then corn with manure; then barley and peas, followed by wheat—and grass three or more years again. J. L. TAYLOR thinks the average crops among good farmers in this town, for different years, are about as follows:—Corn, 50 bushels per acre, wheat 20, barley 30, and oats 50; but he has occasionally raised under favorable circumstances, 70 to 80 bushels of corn, 30 of wheat, 52 of barley, and 80 of oats.

LEVI COLVIN, (formerly member of the State Legislature,) of the town of Conquest, has one of the best farms in this part of the county, having taken the county premium a few years since. It contains 158 acres, and has been occupied 35 years. Very few farms are as thoroughly fenced, the owner possessing a "cedar swamp" from

* This remark applies also to the northern part of Ontario, Seneca, Monroe, and to the whole of Wayne county.

which he has derived plenty of timber. The fences are of "white cedar" and black ash rails, and are five to six feet high. He showed me a fence, bordering the public highway, nearly six feet high, that had stood without any repairs, for 21 years. The stakes were vertical, with wooden bored caps.

He has given particular attention to improving his flock of Spanish Merino sheep for many years past. His course has always been to buy the best rams he could find, and always sell his poorest sheep, keeping the best. Their fleeces now average 5 lbs. 10 ounces each—for which he gets the best market price. He shelters his sheep in comfortable sheds, open on one side. He believes, with GEORGE GEDDES, that good farming is based on the *clover plant*—but thinks that sheep are one of the first requisites of profitable farming, and that *every farmer should have one sheep for every acre of land he cultivates.* In connection with clover, he recommends the use of all the plaster that can be properly applied. Some ditching is needed, which he cuts three or more feet deep, this being essential not only for thorough drainage, but to prevent the earth from falling in among the stones where these are used in filling. A neighbor had pursued the old practice of ditching only 20 inches or 2 feet deep; and now, although he has nearly two miles, he confessed that the water did not run through a single rod of the whole distance.

His course of crops, before the wheat midge made its appearance, was alternating crops of wheat and clover, buying his coarse grain for home use. He now employs the usual rotation of corn, barley, and wheat, followed by clover for two years. Peas he thinks better than barley for this purpose, and oats worst of all. He thinks that wheat after oats will produce five bushels less per acre than if following peas; and five less after peas than summer fallow. He regards the soil of this region too light for manuring wheat on the surface, but prefers applying it as soon as possible after the barley and oats are cut, and plowing it under immediately to a moderate depth. Its strength becomes mingled with the soil in a few weeks, and the scattered oats, which often injure wheat by growing in autumn, are turned under by a second plowing, and the wheat sown. A thorough harrowing each time will assist in mingling the manure well with all parts of the soil. In planting corn, he discards the notion that the grains of corn should be scattered in the hill, but prefers depositing them in contact with each other. When scattered in the hill, the stalks grow up parallel, closely together, and the crop is diminished by the consequent want of room between the ears. Fig. 1. When dropped in contact, the stalks begin to diverge as soon as they are up, and finally spread far apart, affording ample room. Fig. 2. He is so confident from experience that this is the best way, that he is "ready to give any man a good horse" who will try the experiment fairly, by a row of each, side by side, and not find more corn on the row treated as he proposes.

Fig. 2.

Fig. 1.

HENRY WOOLFORD is a very successful young farmer two miles north of Conquest Centre. He has 123 acres, which he bought five years ago, for $6,400. He was enabled to pay down but $3,000. The remaining $3,400 he has paid from the land in the five years, besides making several hundred rods of good post and board fence—in other words, he has cleared about $700 yearly average, with interest $800 and over, besides supporting his family, from the 123 acres. He built last year one of the best barns I have any where met with, for one of moderate size, being 36 by 50 feet, with an excellent basement, and a large shed added; the whole cost being about $700, in a region where lumber is rather cheap. The basement walls are two feet thick and all laid in water-lime mortar. The cattle-stable occupies one end, and a bay for hay extending down from above, occupies the other. The central portion, two feet deeper than the rest, is a root cellar, and will hold 250 two-horse wagon loads of roots, or 5 or 6,000 bushels. It is surrounded and protected in such a manner as not to freeze,—namely, with a thick lined floor overhead; carriage-way embankment at each end, (for driving on the floor above,) a bay at one side, and warm cattle-stable on the other. The roots may be dumped through a trap-door in the floor, for filling this cellar. The hay in the bay is kept from moulding by a thorough circulation of air beneath, effected by the hay resting on timbers a foot from the ground, the air sweeping downwards from a large window on one end, under the bay, and upwards again through a similar window at the other end. A hog-house, very neatly built of cobble-stone, was nearly completed. It is 20 by 26 feet, and is expected to cost only $150. The course of crops here adopted is similar to that already described on other farms.

SMALL FARMS.—A number of small farms, affording specimens of successful management, were visited in the course of this journey. One of the best is that of WM. D. OSBORN of Port Byron. It contains 50 acres of very fertile land. The rotation is the usual one of corn, barley and wheat; but instead of plowing in the clover at two years, it is allowed to remain three years, and will continue to flourish for this length of time if it is well plastered. Over a peck of clover seed is sown per acre, and but little timothy. I have rarely seen a finer field of corn than one of eight acres growing on this farm—it will undoubtedly afford at least 70 bushels per acre. Cattle are kept in stables in winter, and are estimated to eat only two and a half tons of fodder to three tons of not stabled; this is less difference than many farmers have found, but in the present instance the stables are above the basement, and are therefore not quite so warm; and when the cattle run outside, they receive a partial shelter. Buckthorn hedges, 9 years old, formed a barrier between the public road and gardens; but having been managed by another person, they had not been thickened sufficiently by cutting back. The Osage hedges were good, but younger; a serious evil is the tendency in some cases to die out in patches, without any assignable cause. An acre and a half of young dwarf pears, presented a promising appearance; the ground between (10 feet each way) was planted in drills with beans, which was bearing a heavy crop. The variety is the "Marrowfat," a large white bean, of a compact cylindrical appearance, and nearly three-fourths of an inch long.

An excellent contrivance to raise gates over deep snows, and thus prevent their being twisted and broken, is shown in the accompanying cut. It represents a horizontal section of the heel-piece of the gate, at the hinge. The dark portion is the iron hinge, clasping this heel-piece; *a*, the ring which rests on the hook in the fixed post; *b*, a triangular

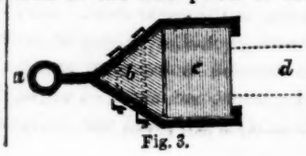


Fig. 3.

timber, the same length as the heel-piece, and firmly riveted to the hinge; *c*, the heel-piece, which slides up and down in the clasping portion of the hinge; *d*, timber of the gate. Wherever the gate is placed, whether high or low, in the clasping hinge, there it remains, being kept there by its weight hanging outwards against the hinges. It is lowered or depressed in a moment by merely lifting the gate enough to prevent this side weight. The lower hinge should be as much above the lower end of the heel-piece, as it is desired to raise the gate in winter.

Another fifty acre farm is that of HORACE CHAFFEE of Conquest. Over 12 acres are woodland, leaving less than 38 acres for tillage; yet these 38 acres have for many years afforded a support and paid the expenses of the family, with common farm crops. The land possesses great fertility, and the owner ascribes much of his success to deep plowing, which varies from seven to ten inches. Everything appeared to be under excellent management, except in the adoption of a systematic rotation—as the following instance will show, indicating, however, the great strength of the soil:—Three crops of wheat in succession in three years; oats the fourth; clover the fifth; corn two years, the sixth and seventh, and wheat the eighth. A moderate amount of manure was applied. The three first crops of wheat averaged 20 bushels per acre; the last as large as the first, with the addition, as the owner remarked, of a crop of cockle, red root, and May weed, which this succession had favored; the oats the fourth year was 60 bushels per acre; and the corn the sixth year 70 bushels. He admitted that a good rotation would be better, promoting cleaner land, and tending to enrich instead of exhausting the soil. He has been quite successful with King Philip corn, by planting the hills about 2½ feet apart, and has thus raised 80 bushels per acre. The whole farm is handsomely fenced with post and board fence, which is regarded as best where the owner has to purchase all the material. It requires the labor of about one man and a half to cultivate and manage this farm.

GEORGE E. SHELDON of Sennett, has sixty acres. He does a large share of the labor with his own hands. The fields are neat and clear of weeds, and when visited, the crops presented a luxuriant appearance. The fences are all of black-ash rails, with vertical white cedar stakes, coupled with wire. The rails are cut on his own land, and are worth forty dollars a thousand in market—the cedar stakes are worth two cents each. The fence, when completed, eight rails high, including drawing materials and all labor, cost nearly one dollar a rod, or scarcely less than post and board, but he thinks it will last twice as long, or fifty years. Some of his fences, eight or ten years old, appeared nearly the same as new. His farm is mostly divided into eight-acre lots, and the usual, but not invariable rotation for these lots is the common one of 1st year, corn on sward; 2d year, oats or barley; 3d year, wheat, seeded to timothy and clover. The corn field of this year he estimates at 50 bushels per acre, but a part of it cannot be much less than sixty. The wheat is only about two-thirds of the average amount, being 20 bushels per acre; it has usually been about thirty. Hay is commonly two tons to the acre; a part of it the present season will not exceed a ton and three-fourths. He thinks a heavier seeding of grass would give better grass and heavier crops, and he intends in future to apply a peck each of timothy and clover per acre. The eight-acre field of oats was remarkably heavy, and was estimated not less than 80 bushels. There are 9 head of cattle, and over 200 loads of manure are made yearly. This is applied to the corn crop, if fresh, or to wheat if rotted; in the latter instance, on the surface and harrowed, after the wheat is sown. The owner thinks that after reckoning all the cost of labor, and all the products, including those consumed by the family, the clear profits would pay a good interest on the land, although accounts in this respect have not been accurately kept.

Among improved FARM BUILDINGS, I observed an excellent new corn house, just erected by P. PULVER of Port Byron, worthy of notice on account of the rat excluding piers on which it stands. They are built a foot square, of brick, each on a broad stone at bottom, and they extend upwards about two feet, one foot of the upper part being furnished with a tin case covering, fitting the brick pier, over which no rat or mouse can make his way. This is better and more substantial than the common way of inverting a tin pan on the top of a thick wood post—the edges are often beaten in, and expert rats will throw themselves up by catching the wire rim. But they may, however, be foiled in this trick by shearing off the wire border, and leaving the smooth sharp tin projecting outwards. This corn crib is 22 by 34 feet, has a spacious granary at one end, cribs extending along each side, a cleaning and assorting floor between, and a floor made of slats overhead, on which a large quantity of corn may be deposited. A side door, as high as the top of the wagon, allows bags of grain to be loaded without any lifting. The whole cost is over $300.

One of the finest barns in the county is now nearly completed, and belongs to N. R. SWIFT of Conquest. It is in the form of an L, one portion being 86 feet by 30, and the other 86 by 26 feet—the whole length over 170 feet. A substantial basement, 9 feet high, for stables, cattle sheds and manure sheds, extends under the whole. The exterior is planed and painted. J. J. T.

CAYUGA COUNTY FARMING—VI.

Suggestions for Improvement.

No one farmer combines all the good practices severally observed among the many. There are none, perhaps, that may not learn something from their neighbors, and who will not therefore increase their profits by a more perfect practice. Those lower in the scale, may, of course, be still more benefitted, if they will only assume enough enterprise to carry it out. These suggestions need not be confined to a single county in their application, but may be adopted to a greater or less extent, in all parts of the country. The following are among the prominent points for effecting improvement:

1. Underdraining.
2. Manufacture and use of manure.
3. Rotation of crops.
4. Destruction of weeds.
5. Improvement of farm buildings.
6. Shelter of animals in winter.
7. Economy in feeding.
8. Improvement of domestic animals by crossing with best breeds.
9. Improvement of fences.
10. Measuring, weighing, and keeping accounts.
11. Extending knowledge of farming, by reading, inspection and experiment.

1. *Underdraining.*—A large number of experiments

have already been given, showing its great advantages. It is only necessary to remark briefly here, that those who have practiced it thoroughly on land with wet subsoils, nearly all agree that the increase of crops pays for it in about two years; and where the land is unusually wet, and has been accumulating fertile materials for a long series of years, one year has paid all the expense. But its great leading advantages are, it gives complete control of the land, lengthens the season some weeks by warming the soil and admitting early tillage, and brings every portion of the farm into a regular, enriching and profitable rotation.

2. *Manure.*—A great deal is commonly wasted. A copious use of litter, in connection with tight basins for it to accumulate in, and preventing any water from reaching it from eaves or from other parts of the ground, will double the supply obtained by many farmers. Where muck can be had, covering the manure yards with successive layers, will be found of great advantage. Every hundred acre farm should have animals enough to manufacture yearly from two to three hundred two-horse loads of manure, if properly managed.

Application of Manure.—It is worth about double, if applied in autumn and spread on the surface, and worked in in spring, especially if preceding corn. Heavy crops of corn have been raised by spreading the manure on grass before winter, and after the grass has begun to spring up green and vigorously the next spring, to turn it under to a moderate depth, and plant. Drawing it out in winter, as it accumulates, answers a good purpose. The application to wheat in autumn has been already spoken of. Compost heaps for this purpose may be made on the intended wheat field the previous spring, by thin alternating layers of manure and soil. In all instances when manure is plowed under, it should be first well harrowed after spreading, to break it fine and intermix it well with the soil. In some instances, its value is thus doubled. It is the fine diffusion with the soil, that renders autumn manuring so valuable, the soluble and enriching parts soaking through every particle of soil. In large lumps, manure cannot be of much use; and in dry seasons it thus injures; while, finely intermixed, it prevents the bad effects of drought.

In all manuring, but particularly in top-dressing, thin and frequent coats finely applied are better than heavy applications rarely given—the former facilitating more thorough intermixture.

3. *Rotation of crops* is absolutely essential to clean farming. Weeds multiply under the influence of certain crops, if they follow unchanged. But a constant change from one crop to another, checks and destroys them. A rotation also applies the fertility of the soil in the best and most economical manner, preserves order, and prevents confusion, and makes a perfectly working machine of the whole farm, costing nothing whatever but knowledge and proper attention to reduce it to profitable practice. The following is a good rotation for strong soils where weeds have obtained possession, or insects are feared:

1st year—Wheat after fallow.
2d do.—Clover, pastured or mowed.
3d do.—Corn, with coarse manure applied the previous autumn or winter.
4th do.—Spring wheat and barley, seeded by rolling.
Two or more years of grass.

If the land is clean, the following is a good course:—

1st year—Corn on sod, manured the previous autumn or winter.
2d do.—Barley, oats, peas and spring wheat.
3d do.—Wheat, previously manured, and manure well harrowed.
4th do.—Clover and timothy 2 or more years.

In either case potatoes and other roots may occupy a portion of the cornfield.

4. *Weeds.*—When it is remembered that a heavy growth of weeds is sometimes equal in bulk or weight to a small crop; and that "one year's seeding may cost ten years' weeding," it can be hardly necessary to urge farther the importance and economy of clean fields. Cultivated fields, and especially hoed crops, may sometimes be made clean when the weeds are an inch high at one-twentieth the expense required after they are two or three feet; hence, if necessary, it would be better economy to pay men double wages to eradicate them at once. All weeds which spread by the roots may be utterly destroyed in one season, at little expense, by plowing once a month deeply and thoroughly. The plants are smothered, and roots and all perish. Annual weeds which increase by seeds only, must never be allowed to ripen them.

5. *Improvement of Farm Buildings.*—A place for everything, and everything in its place; convenience of access from one part to another; lessening labor in transferring hay and grain; ample room for the storage of all products from exposure to the weather, and shelter for animals, are the prominent points to be consulted in constructing barns. The subject cannot be examined here; a volume is needed for its proper treatment. But there is one very general deficiency in most of the barns of this county, with some excellent exceptions—this is the absence of *basements.* They furnish excellent shelter for all animals but horses, cost only the excavation and walls, and pay a large share of the expense by keeping the sills and all lower timbers from decay by proximity to earth and heaps of manure.

6. *Shelter.*—Farmers in the county who have given attention to the subject, agree that about one-third of the fodder of animals is saved by sheltering them from the weather, at the same time that they grow or increase in flesh more rapidly. Cows give more milk, and sheep furnish a larger fleece of improved quality. Very few have provided comfortable and ample protection from the winter, and but few expose their animals entirely; the most have furnished them with imperfect sheds. Some have concluded that shelter is of little benefit, because they have allowed the cold winds to sweep under the sills, or through wide cracks between the boards. Such cold currents make the place but little better than full exposure. On the other hand, some who have attempted the complete shelter of stables, have decided against them, either on account of the labor required to keep them cleaned, or because this labor being partly neglected, the animals have become dirty, and they have had to breathe a foul air. There are but two ways in which shelter may be profitably afforded,—either by a dry, broad, spacious, tight shed, protected from the sweep of winds *on every side*, as the basement of a barn well flanked by other buildings; or else, by means of stables, dry, clean, well littered, and perfectly ventilated. There are many examples in the county of both these practices well carried out.

7. *Economy in Feeding.*—Half the grain fed to domestic animals is wasted in some instances by giving it irregu-

larly, in improper quantities, and in a crude or unground state. Regularity as to time is important, as animals do not digest nor assimilate their food well, when compelled to worry for it out of season. Too large an amount of food for cattle has been already shown to be not only wasteful but detrimental. J. Johnston, from long experience, commences with about two quarts daily, and never at any time, after months of regular feeding, gives any of his cattle over six quarts of ground grain.

8. *Improvement of Animals.*—A bad animal consumes much food, which produces little flesh—is hard to sell, and brings but little in market. The addition of some blood of the best breeds, added to selected native animals, will often double the value of such native stock. A mixture of Suffolk or Berkshire blood, for instance, to the common swine, will cause them to fatten with greater facility, producing often a pound of flesh with half the feed; and a cross of Durham and other improved cattle, adds greatly to the value of the stock. B. & S. Beatty of Ledyard, state that some years ago they received as an average price only twenty-five dollars for their fat cattle; now, since improvement of the breed has been attended to, they get about fifty dollars; and others have been equally successful.

9. *Fences.*—Fences generally are good throughout the county. The intrusion of lawless animals into fields of grain is a rare occurrence,—and forms the exception to the general rule. Fences might, however, be improved. The cheapest, as commonly made, is the crooked rail fence, with vertical stakes wired or capped together, where timber grows upon the place, or may be purchased near at hand. If the rails are fifty or sixty dollars a thousand, the fence, including drawing and building, costs about one dollar a rod—nearly as much as post and board fence; but with good timber, it will last twice as long, with occasional repair or resetting. Black ash and chestnut rails are preferred. Post and board fences are adopted by many. They cost, if well made, about $1.25 per rod, and will last twenty years, sometimes longer. An occasional coating of lime-wash increases their durability, excludes moss, and prevents decay. For posts, the central portion of the log is most durable; and if seasoned before setting, they last much longer. Their durability is much increased by being set over a tile drain, which is effected by cutting a ditch on the line of the intended fence, laying the tile, and placing a flat stone for the bottom of each post,—around which gravel should be compactly beaten; this this will allow the water to drain off quickly, and prevent the post from ever becoming soaked. Properly set in this way, posts of good timber would probably last fifty years or more. One or two coats of coal tar, applied warm, would assist in excluding water.

A good and cheap farm fence is made of black ash or chestnut rails set in mortises made in upright posts. Four rails, with a ridge plowed against the bottom, make the fence high enough. The holes in the posts are made with a large auger, driven either by machinery or done by hand on rainy days. The rails are placed in the posts as the latter are successively set, and can never come out while the posts stand. Such a fence, being straight, occupies much less land than the crooked rail fence, and has a much neater appearance. It requires only half the timber. The cost for each length of 12 feet, will be about as follows:—

4 rails, 6 cents each,	.24
1 post,	.12
Boring, about	.6
Digging holes, and making,	.18
	.60

Or, about 80 cents a rod. It has some important advantages in construction:—the posts being 12 feet apart, only one hole is required for each length, and not two, as with common board fence; for the same reason fewer posts are needed, although required to be stronger; no nails are needed; and it possesses greater strength. It is perhaps the cheapest good fence. If the stuff is durable, the fence will last long.

10. *Measuring operations and results.*—The farmer only who measures the result of his experiment, can know with any certainty, what course is most profitable. One young farmer, by the use of a weighing machine, for weighing all his cattle weekly while feeding them, "saved hundreds of dollars" by two years of its use. All the fields of a farm should be measured and marked on a map, by which the acreable product of all crops may be easily ascertained. The greatest deficiency among good farmers generally, was found to be a want of accurate accounts, both with their crops, and for the purpose of ascertaining their profits.

In concluding these sketches of Cayuga County Farming, it may be thought that a full account requires that the bad side as well the good, should be told; which may be true, only so far as it may serve as a caution, and for setting off to advantage the best practices. The great majority of the farmers conduct their business in a respectable manner, but there are a few who have fallen into some one or more of the following bad practices:—

1. Allowing weeds, such as thistles, docks, stramonium, poison hemlock, &c., to grow along the highway.

2. Allowing elders, burdocks and nettles to grow along fences, and Canada thistles, foxtail, pig weed, rag weed, &c., to grow among and sometimes eclipse crops.

3. To plow, harrow and seed, or plant, land so wet that year after year it yields scarcely enough to pay tillage.

4. To allow boards to become knocked off of board fences, and clapboards from barns; and the hinges of gates to become so deranged that they must be laboriously dragged over the ground in opening and shutting, quickly wearing them out.

5. To pile manure against the side of the barn until it rots it and mires the cattle, instead of spreading it for crops, and leaving a neat clean yard.

6. To admit pigs to door-yards to root up the grass, and help themselves to swill at the kitchen door.

7. To throw kitchen slops into a puddle at the back door.

8. To build barns on the public road, thus making a barnyard of the highway.

9. To scatter implements, such as plows, harrows, rollers, &c., about the barnyard or along the sides of the road, exposed to all weathers.

10. To throw rubbish, brush, &c., into the public road, to the offence of every traveller who has an appreciation of decency, instead of destroying or converting these materials to manure.

11. Badly built board fences, half lifted by frost out of the ground, and leaning half over—occasioned by a shallow and careless setting of the posts, and by not draining the holes.

12. Cornfields with a dense undergrowth of weeds, and potatoes with a dense overgrowth of the same.

13. Hedges and trees planted and allowed to grow up with grass, and consequently never being good for anything—instead of giving them good and broad cultivation.

14. Allowing cows and other animals to run in the streets to pilfer from neighbors, and dry up by being frequently lost at milking time.

There is no one farmer adopts all these practices, and they are generally decided exceptions, more or less, to the general practice. J. J. T.

New-York State Ag. Society.

Agricultural Discussions at the State Fair.

SECOND EVENING.

The Grain Aphis.

Dr. Fitch gave a short lecture on the *grain aphis*, which has suddenly appeared in such large numbers the present year on the heads of wheat, oats, and other grain. He has not had his attention directed to it until the present year. It has appeared in immense numbers in portions of New-England, Pennsylvania, Eastern New-York, and in Canada. It was found last year in some places. Dr. Fitch met with it in his own neighborhood early in May, when grain was but a few inches high. He discovered that the females which were furnished with wings had four young in twenty-four hours—those without wings produced eight in the same time. This fact was discovered by enclosing them separately in phials. They subsequently passed from the leaves and stalks to the grain—and at this time there was a change in the color of the young ones newly produced, from the bright grass green of the early ones, to an orange yellow, doubtless in consequence of the richer food which the grain affords them. During the existence of this insect every mail brought him specimens from all parts of the country, with inquiries. The first came from the neighborhood of New-York city—in a week or two they were sent from Albany, the season there being later; next they appeared at Salem, in his own neighborhood—later still specimens came from Vermont, and lastly from Canada. When the leaves and heads of wheat and rye become dry, they leave these for the green oat crops; and as they continue to increase until this time, oats are more liable to be overrun by them. The insect is never found on the pea, unless grown with oats. This is identical with the *Aphis avena* of Fabricius, long since known in Europe, or the *Aphis granaria* of Kirby—the latter being more correct, as it is not confined to oats. The full grown insect is egg-shaped, scarcely a tenth of an inch long, green early in the season, and mostly orange after the heads of the grain emerge. During spring and summer the young are all females, and reproduce young living animals without pairing; but in autumn males appear, and then for the first time eggs are laid. They pass through winter in the egg state, on the stalks of the win ter grain, and come out in spring. Dr. F. thinks this insect may prove a serious enemy to grain crops by sucking out the juices, but hopes it may not prove so abundant as it has been, as it has several formidable enemies. He has seen an ichneumon deposit eggs in the bodies of the aphis; and the lady bug or coccinella feeds on them, and there are other enemies. He proposes to try sprinkling chloride of lime over grain fields to repel them.

Management of Pasture Lands.

The rest of the evening was consumed in the discussion of the management of pasture lands, and whether new or old pastures are best, and the best mode of extirpating weeds from them. —— Woolworth of Lewis county, thought that the propriety of breaking up pastures depended much upon the nature of the soil; in some places, where pastures become well grassed over, it is well to let them alone; on his own land, which is a strong soil, he gets three times as much hay on newly seeded fields, as in fence corners and other places where the land cannot be plowed. Moss accumulates in old pastures, and the amount of feed diminishes—he has observed that his cows prefer newly seeded land to old. On the other side of the Black river, where the soil is of a coarse gravelly nature, it is better not to disturb the turf. —— Dike of St. Lawrence Co., had found the yellow dock one of the worst pasture weeds, and he extirpated them by pulling them up when the soil is wet, and at which time they will come up easily. Cutting them off near the surface does not kill them. —— Brown of Lewis Co., had purchased land over-run with briers; he kept cows and sheep on the land, and thus subdued the briers—June grass has now taken possession, and furnishes an abundance of excellent feed—he thinks it best not broken up. H. Mills of Lewis Co., gets more feed from his farm by breaking up and re-seeding, and the cattle prefer the plowed portions. —— Lyon of Lewis Co., did not agree with the remark already made in relation to not disturbing grass or gravelly land. He had found that such soils require more frequent plowing than the strong limestone land. He had found the blackberry a formidable weed, and had known a fishing rod, 16¼ feet long, made of a blackberry stalk. —— Woolworth of Lewis Co., remarked again on the great importance of rendering the soil very clean by cultivation before seeding it to grass—he keeps his meadows perfectly clean—if thistles are discovered, they are immediately cut off; if a dock is seen it is pulled up at once before anything else is done, even if it requires five minutes to carry it out of the field. The quality of his butter is much improved since he has had clean fields. Cows refuse grass freshly grown where manure has been spread, but not after the cutting of the first crop of hay. —— Moffit of Oswego Co., seeds down his land after cultivating it for two years, and before all the vegetable mould of the turf is worked out, otherwise the seed does not take so readily. Grass is his main crop. He has found the dock a most noxious weed, and digs it out with a narrow tool running several inches below the surface, and never allows it to go to seed. Many farmers allow it to spread, when, if the time they spend in going to the village to hear the news, was applied to destroy it, they could dig it up five times in a season. The elder was also a bad weed, which he kills by deep plowing. He coincided in opinion with a Dutch neighbor, who said "elders was goot enough in de church; but in de farming he did not think much 'em."

President Geddes has visited a farm in Jefferson county devoted to dairying, and the question occurred to him, Do these men plow enough, or would it not be better to raise more grain? Passing over a farm in this region, he inquired of the owner if an acre in a newly seeded field they stood in, would pasture one cow? The answer was, "Yes." "Will it do it next year?" "No." "Will it the year afterwards? "O No! and in younger permanent pasture four acres are required for one cow." He had ascertained from the official reports that in the dairy town of Fabius, in Onondaga Co., where the amount of grazing and dairying is about the same as in Orange county, over three acres of meadow and pasture were required to sustain a cow; in the grain town of Camillus, in the same county, a cow is sustained on a little more than an acre and a half of grass. In this town, the cattle have the run of the stubble, and are fed with stalks, straw, &c., and much hay is sold in Syracuse besides. These facts show most conclusively the importance of mixed husbandry, which also has the great recommendation of eradicating

weeds more effectually than by running largely to grass. "A man has stated here," remarked the President, "that he has 50 acres clear of weeds; if he will come to Onondaga and show us 50 acres, we will send him to Congress ["poor compensation," remarked Solon Robinson,] "or we will take off our hats to him and show him great respect." The gentleman alluded to replied, "If you will come to my place, I will give you a dollar for every weed you may show."

Dr. Halsey, of Victory, Cayuga Co., thought from his own experience, that old pasture would make better butter than recently seeded, but the latter would produce the most feed. Stannard of Lewis Co., thought that lands seeded sixteen years ago produced more than such as were seeded only three years ago, and the cattle prefer the former. Hawley of Syracuse had seen a farm which contained a broad hillside, that bore nothing but daisies and other weeds, with but little grass, dressed with plaster. A heavy growth of clover immediately took place, without being seeded; a portion was so heavy as to lodge, and the weeds were nearly extirpated. He stated that he had ascertained that in some of the dairy farms of Onondaga county, three acres had been required to support a cow; but newly seeded to timothy and clover, a cow was now sustained on an acre and a half, and the animals would prefer this feed to that growing on hillsides which could not be plowed.

A person whose name was not heard, had found that land seeded three years kept twice as many cows as when eight years seeded. Ellison of Herkimer county, thought plaster and manure, on old pastures, would make them equal to new ones—he said that plaster had eradicated daisies, by promoting the growth of grass and smothering them out. Cows prefer grass where plaster has been sown. The natural meadows on the Mohawk and Canada creek, which have been in grass thirty years, are so luxuriant as to cut a ton and a half per acre at the second crop—the grass is timothy and red clover. Manure is applied in autumn and bushed in. The land is not overflowed. He has over 900 acres of land, and speaks from his own experience.

Solon Robinson has a piece of grass land on primitive rock. Three years ago there was a larger crop of white daisies than all the rest of the growth, grass and weeds combined. It has been manured, plastered, and treated with salt, at the rate of ten bushels per acre. He thinks the salt did the most good; it was obtained at the packing houses for six cents per bushel, and the daisies have now disappeared. He thinks the plaster lessened the daisies, and the salt finished them.

As a summary conclusion it was resolved,

1. That on lands not easily cultivated, top-dressing of fertilizers is required.

2. On arable or easily cultivated lands, either top-dressing or enriching by rotation, is necessary.

THIRD EVENING.

The Agriculture of New-York.

The subject was—"The Agriculture of New-York—does it pay a fair compensation for the capital and labor employed?"

E. Parker of Watertown, said he was a practical farmer, but had kept no book account to show exactly his losses and profits, but thinks such an account would have run him in debt—he had commenced with 44 dollars 20 years ago, and had "hammered, and pecked, and drilled along until the present time," and had succeeded in making a small living, and his farm would now sell for some $4000. He ran in debt for his farm and for his buildings, and found it a pretty hard up-hill business; has paid from 3 to 500 dollars yearly for hired help, yet with "a hard pull and dig" had been enabled to pay for his farm. On the whole, he thought farming a pretty hard business.

Several instances of very successful farming having been mentioned, A. L. Fish of Herkimer county, remarked that in isolated instances farming had been both successful and unsuccessful, but he pointed to the whole State of New-York, which had arisen to a great height of wealth—was this prosperity owing to the labors of the mechanic—or to those of the merchant? No, they were chiefly to be attributed to farming—the cultivation of the soil had produced this wealth. Solon Robinson said the main question is—is farming as good or a better business for a young man to enter, than trade or other similar occupation? The city merchant ascertains from the accurate accounts which he keeps, showing precisely the amount of his gain, that he makes ten or twenty or even fifty thousand dollars a year—yet after a while he becomes bankrupt. One chief reason of this result is, because he did not estimate the expenses of his family. With the business of the farmer, no risk of this kind is incurred; and although he does not live *so fast*, he lives equally well and honorably. He would like to know what proportion of the merchants in New-York would be worth $50,000 at the end of their lives, compared as a mass, to the whole number of persons successfully engaged in farming?

—— Ellison of Herkimer county, suggested whether if the merchants of the city had pursued as economical a course of living as the farmers, failure would not in some instances been avoided. He thinks that farming is a paying business—and that the mechanic and the merchant are necessary—that the man who digs in the earth has rather the advantage of the mechanic. Instances, he said had been given, of great success in farming in grain districts; he had known many instances also in the grazing regions, where men had become rich in a few years. One of these had discovered that it was just as cheap to keep a good cow as a poor one, and had made 700 lbs. of cheese annually from each animal—others had made $60 per cow in each year. They used plaster and top dressings of manure on their lands. In the dairy town of Fairfield, in Herkimer co., large profits had been reached, although there is but little plowed land. The manure of the animals is applied as a top dressing to the meadows, and a high degree of fertility kept up.

Ezra Cornell of Ithaca, in order to avoid the objection made to giving isolated cases, presented a very interesting statement of the agricultural statistics of Tompkins county, which he had with great labor collected through the school districts and from other sources. He had ascertained that there were 204,000 acres of improved land, and 63,000 unimproved;* these were valued at 11 million dollars. The capital used for the cultivation of this land, including cattle, horses, sheep, swine, and other animals, and $379,000 worth of tools, &c., was estimated at two millions; making the whole amount of capital invested in farming in that county, 13 millions. A carefully made statement was then given of the annual products, the details of which would occupy too much

* We give the round numbers only—the statement which he pre ented furnished minuter details.

space in this report, the numerous items of which were obtained through a competent person selected in each school district. This estimate of all the farm products of the county for one year amounted to $2,713,000. The usual allowance made for the *labor* of the farm is one-third; but allowing for errors, taxes, and seed, and calling the whole *one-half*, there would remain for the nett proceeds $1,356,000, which would be a little over *ten per cent.* This does not include the many farm improvements in buildings, dwellings, barns, fences, in draining (of which 150 miles had been made in a single town,) highways, &c. E. Cornell remarked that farmers generally were improving their condition every year, rode in better carriages, had increased home comforts, besides which they often sent their surplus money west to buy new lands for their sons, and it had been also discovered by examining the county records, that most of the bonds and mortgages were held by farmers. He said in conclusion, that he had not been able to discover any facts from which he would advise farmers to quit their business for other pursuits.

S. WALRATH of Canton, St. Lawrence co., thought there was a chance for mistakes in such estimates, and that farmers generally give one quarter more than what they really raise—he recommended that accurate measurements should be made, and the whole county thus estimated—and if this were done, it would still show farming generally to be the most profitable of any business. E. Cornell replied that by carefully selecting proper men, for example such as the gentleman who had just spoken, very accurate results might be secured, and far more reliable than through the census.

—— HAWLEY of Syracuse, said that many committed the mistake of supposing that farms should pay a full interest besides all that was consumed in the family. A clerk who receives $600, can perhaps scarcely support his family, as he has to purchase all his supplies—the farmer has these already at hand. He had travelled lately through all the dairy districts in the western part of this state, and had observed a general prosperity among the residents—they lived in good houses, set good tables, rode in comfortable carriages, and educated their children at academies; in the city, these luxuries were confined to a comparatively small number, and many of these subsequently fail. He had known poor boys run in debt for 50 acre farms, now owning 500, 600, and in one instance an 800 acre farm, all paid for at a high price, from the land itself. He advised farmers to educate their sons as farmers.

JAMES VICK of Rochester, dissented from much that had been said; in allusion to the successful instances that had been mentioned, he could cite a dozen others where farmers had sunk all they had; he thought that of many who had become rich, they had succeeded through speculation, that is, by the rise in the value of their lands, which were bought at low prices, and afterwards became valuable. He thought farmers generally were quite ignorant, and knew but little of scientific agriculture.

—— HAWLEY of Syracuse, said that a farmer who undertakes to speculate, generally fails, and in almost every instance where farmers had become bankrupt, it was by not diligently attending to their business, but by neglecting it for other pursuits, or by extravagance and idleness.

SOLON ROBINSON asked, What riches are? The answer must be, all the comforts of living. Agriculture had given these comforts and improvements—it had made the wealth of the whole country. He cited the growth of our inland cities—looked over the great west, which if it had not blossomed as the rose, had raised some little grain, and had occasionally sent a bullock down to New-York—he spoke of the enormous increase in the value of these wide regions, and asked who has created it all, if not the farmer—and is not farming then a paying business?

—— HUNTINGDON of Black River, said he had hunted squirrels on the ground where this large village of Watertown now stands, and when the land it occupies was thirteen shillings an acre—that farming had built it up; and he thought from his own limited experience on 56 acres (being chiefly a mechanic) that the products of farming might be doubled.

—— JOHNSON of Buffalo, said he was a young man who had been unsuccessful in farming. He had no farm of his own, and wanted to know how to get one? He had bought a hundred acres by running in debt; and being in poor health, and able only to superintend the labor of others, had been scarcely able to pay the interest. After two years, he became discouraged, and sold his land.

A. B. CONGER of Rockland co., (the chairman of the meeting, and who had ably superintended all these discussions of the state society,) remarked as a summary of the whole subject, that although many individuals of energy and judgment could run in debt for land and pay for it in the products, yet that generally speaking, farming to prove successful, required a certain amount of capital to carry it on—if this were insufficient, one must expect all the penalties and difficulties resulting from a want of capital in any other case. A most important consideration in any business, is its permanence and security—a business which farming eminently possesses. A person residing in the city of Boston, had kept during a long life, a list of all such as had pursued trades; and he had found that out of every hundred so engaged, ninety-seven had failed—and of the remaining three per cent, a small portion only continued to hold their means to the end of life. There are also certain failures in bad seasons in farming, but we must balance the cases and take the average. The owners of real estate in the city of New-York, after paying all the taxes, do not generally receive more than three and a half per cent; and if 5 per cent is obtained as an average from farming, (whether all or a part of this be expended in improving and increasing the value of the land,) he proposed as a question for the votes of the members present, that this be regarded as paying a fair compensation. He alluded to the estimate presented by Ezra Cornell, where the products of the $13,000,000 invested, were over $2,700,000, and said that even admitting $1,700,000 were consumed for labor, taxes, and all contingencies and errors, it would still leave $1,000,000 as the interest on $13,000,000, or over seven per cent. He stated that in England, a capital of $10,000 was required to stock, manure and carry on a farm of 150 acres; and that there, where there is capital enough, farming proves very profitable. It is the improved farming that has brought the rental up from one shilling to three pounds, (15 dollars) per acre. Farmers here do not use capital enough. He made the following proposition, which was adopted by the meeting, without a dissenting voice, viz: that the agriculture of the State of New-York, when pursued in accordance with the rules which govern business operations, and with the light which science and practice throws upon it, pays a fair compensation for the capital invested.

EZRA CORNELL submitted a resolution which was adopted, requiring the Executive Committee to furnish blanks to enable all the counties to procure statistics similar to those that had been presented this evening.

The meeting then adjourned *sine die.*

[For the Country Gentleman and Cultivator.]

Agricultural Notes in Monroe Co., N. Y.--No. II.

The Way to Commence Farming.

It is universally acknowledged, I believe, by the most successful farmers, not only in the Old World, but in America, that a *mixed husbandry*—rearing and feeding neat cattle, sheep and swine in connection with raising grain—lies at the very foundation of successful and progressive agriculture. Still it is not denied that there is much good agriculture in the world which pays well, and which might be called progressive farming, where not a hoof is kept from the end of one year to the other. But in order that agriculture may be a paying and at the same time a self-sustaining system, the only reliable way is to keep more or less stock, and consume a large proportion of the coarse grain whith is raised on the farm. If a farmer has an abundance of surplus capital with which he can purchase guano, ground bone, poudrette, or other fertilizers, he may keep his soil good, and raise large crops of grain or grass without keeping stock of any kind. But this would not be such a system of farm management as we would endorse or recommend to those who are about to commence farming operations. The great idea in being a successful farmer, is to commence farming with a very limited capital, and to adopt such a system of management as will return capital enough to defray the expense of cultivation, and pay for the improvements on the farm, and leave a profit towards paying for the land, and at the same time not impoverish the soil at all, but on the contrary improve its fertility from year to year. This may be set down as good farming, as a self-sustaining system of agriculture; and it is proposed to go a little into the details of the system for the special benefit of those young farmers who may be about to commence their career in the cultivation of the soil, and perhaps I could not do it in a more satisfactory manner than by recording the system of farm management adopted by Mr. Isaac Bower, North Chili, Monroe Co., N. Y. In the outset I may be allowed to say that Mr. Bower was formerly one of the best and most thorough-going farmers of Tompkins Co., who always raised good stock of all kinds, and particularly neat cattle and swine; and his superior crops of grain were a certain evidence that all his manure was economically saved and judiciously applied to his soil. Having sold his farm, he located in the place just mentioned about three years since, on a farm of about 100 acres, which, it is said, had been very poorly managed for many years.

Mr. B. possessed a good competence, but no surplus capital with which to defray the expense of stocking and improving his land; but his main dependence for revenue was, and is, on the productions of the farm.

Mr. Bower's ideas of farm management are that one must have a good supply of barnyard manure in order to keep his soil in a good state of fertility; and that in order to have that manure he must keep stock, and in order to have *good* manure that stock must be kept well, and that it is much less expensive, and far more profitable, to keep stock of all kinds *well*, than to *half* keep them, and far more profitable to pay a good price for a choice animal than to attempt to do anything with an inferior animal, even were it furnished gratuitously.

Management of Cattle.

After Mr. Bower had purchased his farm his first step was to purchase stock for his farm. Among his neat cattle is now a very fine Durham bull, which he purchased for $100, and a cow for $150, out of one of the best herds in the Empire State, and he purchased none but superior animals. He made calculations about how many he could keep and not feed his pasture too close. He usually keeps about three to six good cows, and raises their calves usually by feeding them, and seldom allows them to suck their dams. From the birth of a young animal until its carcass is fully developed he aims to keep every animal improving gradually during both summer and winter. His calves are not fed as high as if they were being prepared for veal, but are kept growing and in a thriving and moderately fat condition, and his young bull and heifers now on hand are very nice animals. When there is not a good supply of grass, every animal receives a little meal. He has now one *old* cow, which is a most superior animal, not only for stock, but for butter and milk, which he has fed meal all summer, and he thinks it pays well by increasing the *quality* as well as the quantity of milk. He is very careful in late autumn, when grass begins to fail, not to allow them to lose any of their flesh which they have taken on during summer. His animals are all properly protected from storms and pinching cold during the severity of winter, and every one gets a little meal daily in addition to a good supply of cornstalks and good hay and straw.

I asked him how much heavier his young animals usually are in the spring than they are in the fall when he commences foddering them.

As several of them had been weighed in late autumn, and then again in spring, I found that one two year old steer had gained 128 pounds, and another 114 pounds, while the bull had gained 194 pounds, with simply ordinary keeping. He calls ordinary keeping about one quart of meal daily, with some hay, cornstalks and straw, and towards spring he increases the amount of meal, sometimes to two quarts per head. At the age of three or four his practice is to increase the amount of meal, sometimes to eight or ten quarts per head, until they are ready for the shambles.

Management of Swine.

Instead of availing himself of swine of a very exceptionable breed, he procured a sow or two and boar of what he considers the best breed, and immediately commenced feeding out his coarse grain. His practice with swine is worthy of adoption more generally, as his manner of producing pork is founded on the most correct principles of philosophy of producing the greatest amount of pork from the smallest number of pounds of meal. He feeds but little whole grain; and as soon as pigs are old enough to be weaned they are well fed with milk and meal, and kept in a close yard and pen, and not allowed to race about the fields, and to run off during the day half as much fat as they have taken on. He has at the present time five beautiful sows with pig, and a lot of shoats and hogs being fattened, and a few store pigs. He sows a few acres of peas and feeds them, vines and all, to both his store hogs and to those that are being fattened.

He has experimented more or less in crossing various breeds, and although he has met with very satisfactory success in all his efforts, he thinks that a cross between the Berkshire and the red-haired Russian produces pigs a little superior in almost every respect to any other cross which he has tried. And I think his conclusion is a very correct one, for while a cross between many other breeds will often produce very nice pigs in most respects, in some very important points they will be quite deficient. Every man who has had but a limited experience in crossing swine knows that there are many grades, and some full-bloods, that are very nice, with the exception of *size*. They will make fine pork, but are intolerably small. But his pigs—the product of a Berkshire boar and a Russian sow—have great length and breadth, and take on fat very readily, and are good feeders, and make very profitable pork for market. I think it would be difficult to find a lot of shoats which possess a single point superior to his shoats, the product of the Berkshire and the red Russian. Mr. B. is located on the New-York Central railroad, and sends his pigs to any place by express where he may have an order. His five sows will farrow in autumn, and instead of selling his crop of Indian corn at a very low figure he expects to have it ground, and feed it to these pigs, which will return him more than twice as much per bushel as he could obtain in any of the grain markets. He thinks that there is great profit in consuming Indian corn at home if one gets a good breed. I can testify from my own experience, and from what I have seen of his management of swine in years past, and at the present time, that he realizes far more from his coarse grain by feeding it to swine and neat cattle than he could do in any other way.

When I was at his house he had just thrashed his wheat —in August—and had contracted all the flour of a load of wheat to laboring men in his vicinity. By this means he secured a good price for new flour, and retained the bran and shorts for feeding his stock.

Management of Manure.

Mr. Bower aims to make all the barnyard manure ne conveniently can, and he is very careful that no more of it be wasted than will unavoidable escape by evaporation when hauling it to the field, and while it is spread on the soil. He prizes very highly the manure of his animals which are being fattened, as such manure always affords an abundance of grain-producing material, which will not only produce a heavy crop of grass and straw, but very large ears and heads, and plump kernels. He uses up all his pea-vines for littering the yards and pens of the swine, which will absorb all the liquid manure, and by being mingled with the solid portions a fine lot of the best quality of manure is produced, which tells a very useful story about the profit of depending for a good share of the profits which accrue from feeding stock, in superior crops of grain and grass. Nothing in the line of manure is wasted. Every corner of his manure yard had been neatly scraped with a broad hoe, and hauled to the field, where it is not allowed to remain in heaps until it is half wasted away, but is neatly spread and plowed in as soon as practicable.

Management of Poultry and Eggs.

Mr. Bower keeps a few dozen choice hens for the eggs which they produce, and although he has been pretty well "shanghaied" in years past, he gives the preference to the black Polands as layers, although the Dominiques are preferred for market or for the table.

Their manner of keeping eggs fresh until they will command a good price is worthy of notice. As the eggs are collected from day to day they are put in a barrel, with the small ends down, on a laying of oats. When one course of eggs is full, another laying of oats, and then a laying of eggs is carefully put in, until the barrel is full.

In the early part of winter, or when eggs command a good price, those that are kept in this way will readily sell for the price of fresh eggs. Great care is exercised to save none but those that are entirely fresh, as those on which a hen has been permitted to sit for only one day or one night will be injured so much that they will not come out good after having been kept two or three months. Wheat bran would probably be quite as good for keeping them as oats.

Flax Seed and Oil Meal.

Mr. Bower speaks highly of oil meal and of flax seed meal, in connection with other meal, for feeding stock of all kinds. He thinks that when farmers sell their flax seed at a low price and purchase oil meal at a high price, they sacrifice their own interests far more than they are really aware of.

The statute weight of a bushel of flax seed is, I believe, in the Empire State, fifty-eight pounds, which would be, at $1 per bushel, less than two cents per pound. Now, after expressing almost all the oil from the seed, which would afford a great amount of nourishment to stock, the oil meal—the refuse or bran—is sold at two cents per pound in most places, which is more per pound than the pure seed.

Mr. Bower's practice is to feed the *pure seed*, instead of having all the best part extracted, and then of feeding only the refuse. He mingles about one bushel of flax seed with about ten bushels of oats and corn, or barley, or any other kind of coarse grain, and has it ground all together. He thinks this makes most excellent feed for all kinds of stock, and gives a neat gloss to their coats, and keeps their bowels in a healthy state, and makes very excellent manure. The quantity above stated is not sufficient to operate at all as a cathartic.

Stocking Down Land.

Mr. Bower's practice in regard to stocking down his fields, is to sow in autumn, after wheat, about four quarts of timothy seed, without harrowing in or bushing in, and in the following spring he sows from three to four quarts——six or eight pounds—of early clover seed on the same ground. He had when I was there two large fields which had been seeded in this manner, and the clover and timothy formed a complete mat of grass, and was very large and luxuriant.

He usually gives his wheat soil a good sprinkling of fine manure, and sometimes has hauled muck and spread it thin where the winter wheat is sowed, which increased very much the crop of wheat, and facilitated very much the catch of the grass seed.

In addition to his system of underdraining, which is now in progress, there are many other items of interest in his system of management which would be well to notice, to which we may refer at some future period. We have no misgivings in alluding to Mr. Bower's farming, for we are sure it is a *most excellent beginning*, and may be set down as *progressive agriculture*. S. Edwards Todd.

CHEESE-MAKING IN ONEIDA COUNTY.

Messrs. Fraser & Crosby of Rome, who received the first prize on Cheese at the late Oneida County Fair, furnished the following statement in relation to its manufacture:

The Cheese on exhibition by us are made alike in every respect, although at different dates of the same month, viz: the 6th, 18th and 26th of June, from the night and morning's milk of 400 cows; the night's milk being strained, and emptied into two tin vats, set in wooden ones, with a space left for water; about one gallon of pure water being added to every *ten* gallons of milk to prevent the cream rising over night, and to destroy the animal heat; the water was then allowed to run, and the milk thoroughly stirred until it was cooled down to 68 degrees, the water being kept running all night, between the outer and inner vats. The morning's milk was then emptied with the milk of the previous night, and well mixed by stirring, without the addition or removal of cream. The milk was then heated to a temperature of 83 degrees, by steam conducted into the water between the vats; then anatto dissolved in ley sufficient to give the desired color to the curd, and rennet enough to produce perfect coagulation; in about forty-five minutes it was thoroughly mixed with the milk. The curd was then cut in blocks about an inch square, with a set of wooden blades, to allow the whey to rise. The whole was then gently broken with the hands, and at the same time the heat raised to 88 degrees, when after stirring fifteen minutes the curd was allowed to settle, and the whey drawn off from the top with a syphon. The curd was then broken with the hands for thirty minutes, and the steam applied, raising it to a temperature of ninety-four degrees, when it was stirred gently for about twenty minutes, the curd allowed to settle, and the whey dipped off. It was then stirred and broken for twenty minutes, and heated to ninety-eight degrees, at which point it was stirred for about ten or fifteen minutes, and then covered with cloths, and left standing until thoroughly done; it was then dipped into the sink and stirred thoroughly to allow the whey to run off, and the curd to cool gradually to keep it from adhering together in large lumps, so that the salt may have the same effect upon the entire body of the curd. Two and three-quarter pounds of solar salt being used for every 100 pounds of curd.

The cheese was then pressed for about one hour, then taken out and bandaged, turned and put back to press, until the next day's curd was ready to be taken out. It was then taken to the curing room, the face rubbed with whey butter, and left standing until the next day, turned, rubbed with the same on all parts, after that turned every day and rubbed with the hand, grease enough only being used to prevent cracking or mould.

The rennet is prepared by soaking merely in water, and using salt enough to prevent the whole salt from dissolving; kept in stone jars in a cool place.

PLANTING CHESTNUT FOR TIMBER.

Young, second growth chestnut trees, make excellent fencing and other timber—and if, in addition, it be cut in summer, (whether with or without regard to the age of the moon, no matter which,) it will last a long time. John Johston of Geneva, finds second growth chestnut best for his fence posts—old trees he regards as of little value.

Chestnut trees on light soil, grow very rapidly. Any farmer who has a few acres to spare, may make a very valuable investment by planting a chestnut orchard. The best way to do it, is to take a field that is suitable for some cultivated crop, corn for example. Plow two or three furrows together into a ridge every twelve feet apart, over the whole field, either late in autumn, so as to admit of early planting, or else very early in the spring. Plant the chestnuts along this ridge, three or four in a hill, about the same distance as hills of corn. They are difficult to transplant with success, or without check in growth, and therefore this mode secures vigorous young plants at once, thinning out all but one in each hill the following year. Plow the spaces between, and plant with corn or potatoes, and cultivate and keep clean the young trees with the rest of the field. If care is taken by using stakes, each hill of chestnuts may be made to stand in a row with the hills of corn, so as to cultivate the whole field both ways. Or, if the corn is planted with a drill, it will not be necessary to take any care in this respect, as the cultivator will run one way only. This cultivation, if kept up for a few years, with crops of corn, beans, potatoes, carrots, &c., or with plowed strips near the trees, and sowed grain between, which is not so good, will give a very rapid start to the young trees; and if they are thinned out in some years as they crowd, thus giving good stakes, they will by twenty years, form a very valuable plantation—this being the age found most profitable to cut down young timber for renewal. A great advantage of this plan is, the wagon used for drawing off the timber may be driven between the rows in a straight, smooth road, and not as in common irregular woods, with constant twists and turns to avoid hitting trees, stumps or roots.

Many fail in raising the chestnut from seed, because they allow the shell of the nut to become dry. Take fresh chestnuts in autumn, and mix them with slightly moist leaf mould, and leave them exposed, out of the reach of mice, all winter—they are best if in contact with the moist ground. Then, as soon as they first begin to sprout in spring, plant them two inches deep.

Locust trees may be planted in the same way with corn, but need not be planted before the corn itself, as they will not sprout without scalding; for this reason they are more easily managed. They make admirable timber, when not injured by the insects.

[For the Country Gentleman and Cultivator.]

RIO GRANDE SPRING WHEAT.

An extract from the Minnesota Farmer, in the last Co. Gentleman, highly recommends the Rio Grande variety of wheat. I have raised it for the last four years, and have not failed of having a good crop. The spring of 1857, I sowed one bushel, (brought from Illinois,) and harvested from it 14 bushels of the finest spring wheat I have ever seen. It makes the whitest and sweetest bread of any variety of wheat ever raised here.

Deerfield, Mass. JAMES CHILDS.

[For the Country Gentleman and Cultivator.]

WINTERING LATE SWARMS.

In the Co. Gent., Aug. 22d, "A Young Farmer" asks, "Is there no way to preserve a late swarm of bees over winter, or must they be taken up after the old fashion." I could say both yes and no to this question. I must know its conditions to give the proper answer. The simple fact of being *late*, has no effect on its wintering qualities. I have had swarms after the 15th of August that wintered without the least trouble, having provided themselves with everything necessary from the flowers. I have had them in May that failed to do so, and were lost in consequence. If a swarm in addition to being late is small, and has constructed but few combs, and has but little honey, which I suppose is the kind of swarm meant by A Young Farmer, the chances of successful wintering in this latitude (43 deg.) are very few, and I would advise that all such be taken up if the owner has not philosophy to put up with a loss. By killing the bees of such a hive now, as soon as the brood is hatched, and getting all out from between the combs, and setting the hive and contents away in good order for another year, it would be valuable—worth just as much to a new swarm as so much honey and comb of its own making.

But should it be desired to keep a colony, however remote the chances of success might be, I will give some of the requisites and a few directions. First, a good colony of bees is important. If too few, add those of some condemned stock or swarm, or unite two or more small ones, smoking to prevent quarreling, with tobacco or puff-ball, and confining them to the hive some two or three days. Another equally important item is honey. They should have combs sufficient to hold enough for winter—one with less should be disposed of as above. Feeding should be done sometime in October, after the brood has all matured. Let it be done in as short a time as possible, otherwise the new brood that the feeding will induce them to rear will consume too much of it. Not much less than twenty or twenty-five pounds of contents—bees, combs and honey—will be sufficient. Surplus boxes part full set on the hive, with a hole for communication, will be emptied in a short time, and still more quickly if the caps are cut from the ends of the cells, before putting them on. Combs taken from a hive and put in a box will answer just as well. Strained honey, if taken from a healthy hive, will do to feed without any preparation. Put it in a shallow dish with some floating material to keep the bees from drowning, and set it on the hive. If the dish is very smooth at the sides, something must be put by them to assist the bees in creeping in and out. When feeding at this season, particular care is requisite in all cases to have the box cover to fit closely, to keep out robber bees from other hives. They are quite apt to scent the honey and make an effort to carry it away, and sometimes when we have fed enough to bring the hive up to the required weight we find it lighter than when we began. When honey cannot be had, sugar may be substituted many times with good results; but this had better be fed as consumed through the winter. The hive is taken to a dark, warm cellar, turned bottom up, and the edges of the comb cut off square, and some shallow dish set on them. Syrup made of good white sugar as near the consistence of honey as possible is poured in. Two or three gills is enough for a week. The dish will be fastened to the combs very soon, and should not be broken loose till done feeding, as it disturbs the bees, which should be kept as quiet as possible while in the house. Whenever a pleasant day occurs, suitable for the bees to fly, *all* that have been fed should be set out for an airing. We cannot get the feed of an exact consistency of honey, and it will sometimes—quite often—produce dysentary, making it necessary for them to have an opportunity to leave the hive whenever the weather will admit. Such as were fed in October often leave some of their honey unsealed that will sometimes sour and induce the same effect. If pleasant days occur once or twice a month, so that they can fly, such fed swarms will do very well, but in steady cold weather for a long time they are quite sure to suffer. M. Quinby. *St. Johnsville, N. Y.*

Moles.—Please tell me how to rid a piece of ground of moles. I have a few acres which have been infested with them this season. G. H. B. *Circleville, Ohio.* [We know of nothing better than good rat-terriers, or in their absence, meat poisoned with strychnine—can any of our readers furnish better remedies?]

[For the Country Gentleman and Cultivator.]

An Excursion by Rail and Carriage among a Portion of the Farmers in New-Hampshire.

Messrs. Editors—During the past week I took a trip to Plymouth by railroad, and visited some of the adjoining towns by carriage drive. Plymouth is about 50 miles north of Concord, N. H.

My excursion gave me an opportunity of forming a pretty accurate estimate of "farm crops" in the section of the State traversed. The hay was considered more than an average with that of the past two or three years. Winter wheat, though not very extensively grown, yielded good returns, getting ahead of rust, midge and lice. Spring wheat, rye, oats and barley, not as good as last year, but still pretty fair crops of each. Corn I think will husk out better than it did the two past harvests. I saw hundreds of fields of nearly "dead ripe" corn, nineteen-twentieths of which had, and will have, the stalks cut, or topped. Very few fields had been "cut up" and shooked, as is so largely practiced and strongly advocated by farmers in some other sections of the country. The different methods of harvesting the corn crop have been discussed in the agricultural journals, "pro and con," for over forty years to my certain knowledge, and it seems the question is as far from being theoretically and practically settled as it was when first agitated. My decision of the matter in dispute is, "let each be persuaded in his own mind" in the management of his corn crop, and practice accordingly. Col. Paul R. George of Hopkinton, N. H., has a field of four acres of very fair and even grown corn on the alluvial soil bordering the Contoocooke river, which he has recently treated in the following manner, viz: First four rows across the field have had the stalks cut, or topped; next four rows cut up near the ground and stooked; next four left standing with the stalks uncut. The same course is carried over the whole field. The third part of the crop whose stalks have been cut will be harvested by itself, husked and carefully weighed or measured. So with the other two portions of the field. The Colonel assures me the experiment shall be accurately carried out, and he has promised me a detailed report for the Co. Gent. On Tuesday morning, 10th inst., there was much frost, and in some low situations corn and other plants were considerably frosted, and in consequence of the leaves being killed the corn must fail to fully mature and ripen well; however it is quite satisfactory to know the frost was confined to comparatively small districts, and that the fine warm weather since has put most of the corn beyond injury of our ordinary autumnal frosts.

From the many extensive fields of potatoes I saw, I think there was an unusual quantity planted last spring, and what is quite encouraging, there has been but very little rust or premature decay of the tops, and I have yet to learn of the first field suffering from the *rot*, like that of past years, though it is quite probable the dry rot, so called, may destroy a small portion in the cellar during winter, as has been the case in many instances this past year or two.

Apples and other fruits are very scarce in this and most other sections of the State, but at Plymouth and vicinity there is a fair amount of apples, though mostly on natural or ungrafted trees. From the foregoing statements in regard to the crops in the Granite State, we shall not be likely to suffer for most of the necessaries of life, for upon a pinch we can dispense with southern sugar, rice and tobacco, and not suffer greatly neither.

The town of Plymouth is pretty well up in the vicinity of the "Everlasting White Hills,"—from which, it is said, the last "winter's crop of snow" has not yet fully disappeared. From the elevated and mountainous section of that part of the State, some persons who have never visited it may be led to suppose it cannot be a good agricultural district of country. Such a supposition is entirely erroneous. Plymouth, and the adjoining town of Holderness—"over the river,"—contain a large number of excellent farms and farmers, scarcely to be excelled in any other portion of the State. The best farms, however, are located upon the opposite banks of the Pemmigewassett and Baker's rivers, which form a junction near the large and beautiful village of Plymouth.

The extensive intervales bordering these rivers, were originally of the most fertile character, and by good farm management they are now mostly so, yielding heavy crops of corn, potatoes, oats, hay, roots, &c., all of which find a ready cash sale at the farmers' doors—saving them the trouble and expense of seeking a distant market on the seaboard, as formerly; railroad facilities and manufacturing establishments in their midst, have wrought this favorable change, the good results of which are seen on every hand—in the well finished and furnished farm-houses, capacious barns, and neatly arranged out-buildings, walls and fences, and every thing else pertaining to an intelligent, wealthy, moral and patriotic community of farmers, who till their own soil, undisturbed by rapacious landlords, rents and tithes, as is the case in many of the European States.

Of the many farms I noticed, I have only time now to refer to two of them, viz., those of J. S. Ryan and N. C. Cummings. Mr. Ryan was a native of Plymouth, the son of a farmer of that town. While young he left home for Boston, and for some years served as clerk in one or more stores in the city. After which he went into the mercantile business, which he successfully carried on for some years; having acquired a handsome property, he returned to the "Old Homestead." He has built a house with all the conveniences of a first-class residence of the city, with the single exception of the *gas*. He has gone into farming with the same energy and zeal with which he was actuated while engaged in business in Boston—keeping an accurate account of "out-goes and income" with his farm—leaving nothing to the hap-hazard chances of guess-work, as is unfortunately too much the case with a large portion of our farmers.

In November last I visited Mr. R., and gave a somewhat detailed account of his farm, which was published in the Co. Gent. This precludes the necessity of going into a lengthy description of his farm at this time; but I will refer to an experiment he was then making, in *claying* an eight acre field of light sandy soil. The field had been long under culture, and being very sandy, liable to suffer from drouth, &c. In 1860, the field was in corn, rye, and oats. After the crops were removed, the whole received a heavy dressing of a clayey marl, taken from a deep cutting about one-fourth of a mile from the field. The number of loads applied was four hundred, (of 40 bushels per load,) at a cost (per contract) of twenty-five cents per ox-cart load. The marl was spread in November, and left upon the surface to the action of the atmosphere and the alternate freezings and thawings of winter. Last spring the field was sown with 15 bushels of the English Potato-oat—yielding an immense growth of straw, and apparently a corresponding quantity of grain, which has not yet been threshed. Herds-grass and red and white clover seed were sown with or at the time the oats were. A better catch of grass is seldom seen than among the stubble of this oat field. There is something in this kind of marl peculiarly favorable to the growth of the several clovers. In the long run, I have no doubt the $100 expended for marling, will prove a better investment than if expended for any of the commercial manures now in the market.

This year there was 85 tons of hay cut upon the farm. "Under the plow," 10 acres of corn, 7 of potatoes, 21 of oats, 8 acres rye, 5 of wheat, 5 of buckwheat—total 56 acres—besides beans, vegetables, roots, corn for fodder, &c., equal to four acres. The stock on the farm consists of 35 head of cattle—being Durhams, Devons, Jerseys, and native,—6 of the horse kind, 8 swine, Suffolks from the Stickneys, Boston, and 120 sheep, consisting of native, South-Down, and grade. In the flock is a fine South-Down buck, from the flock of Sidney G. Fisher, Philadelphia; and recently he has purchased a buck and four ewes of the Hon. R. S. Fay, Lynnmere, Lynn, Mass. The sheep are, I think, called "Improved South-Down." They had not arrived when I was there.

This autumn he has sown 28 acres of winter rye, and 5 of wheat. Last spring, he sowed one ton of American guano, on partially bound out grass land, very much increasing the crop. The unnsually wet spring, and early summer, no doubt operated favorably for the experiment. The result would have doubtless, been different the year previous, in consequence of the lack of rain that season. He has also—like many others of the farmers in his section, made free use of Coe & Co.'s superphosphate of lime, upon the corn and some other crops, and in nearly all cases, with very decided and favorahle results. The example of Mr. Ryan, in improving two or three old farms, now in his occnpancy, will not be lost upon his brother farmers in his neighborhood. Some may be slow in attempting any great change in their accustomed routine of farming, and paying out their money for improved farm stock, tools, &c., but sooner or later, they will obtain a "new set of ideas," in regard to agricultural improvement based upon improved farm stock, deeper plowing, higher manuring and better and more thorough and careful culture.

The other farm I visited was that of N. C. Cummings, Esq., and to satisfy you, Messrs. Editors, that he is a number-one farmer, I need only refer you to your subscription list, for there you will find he has been a paying subscriber to the CULTIVATOR and Co. GENT, from the first number you published, down to the present time, without "break or interruption," and he says, during the time he has each year more than "got all his money back again," in the information derived from the pages of your publications.

His farm comprises some 200 acres; from forty to fifty acres of which is "high intervale"—that is, not overflowed by ordinary freshets. The soil is of a fine loamy texture, easily worked, and under his skillful management, very productive. He had dug sixty bushels of potatoes the day previous to my visit. They were as sound as a roach; the only fault they had was their enormous size. At least one-third of them were too large for the market or for table use—a fine white variety, the seed a year or two previous from Vermont. He is experimenting with different breeds of cattle, having some fine and large Devons from Hurlbutt, Conn., of his more recent importation. Durhams derived from some of the best Kentucky herds. Chester Co. Swine of the true blood, and Suffolks direct from Messrs. Stickney, Watertown, Mass. Sheep of the South-Down and Leicester—one of his South-Down bucks procured of Sidney G. Fisher, Philadelphia. He also has the true Bronze Colored Turkey—the gobler, with "turkey fixings," would furnish a thanksgiving dinner for a large neighborhood—Rouen ducks, Hubbard squashes, Marblehead cabbages, &c., &c. A knowledge of the "how and the where" of obtaining all of the above breeds of cattle, sheep, swine, fowls, &c., &c., was derived from the advertising columns of the CULTIVATOR and COUNTRY GENTLEMAN.

He had four acres of corn, somewhat injured by the cut worm; two and a half acres of potatoes, five acres of oats, corn fodder, beans, and various kinds of garden sauce, fruits, &c.

The farm house, barns, sheds and out-buildings, are large, convenient, and in good repair, all bespeaking the industry, energy and skill of a farmer whose progress is onward. LEVI BARTLETT. *Sept. 26th*, 1861.

[For the Country Gentleman and Cultivator.]

OATS ON SWARD LAND.

MESSRS. EDITORS—Your correspondent W. from Utica, on page 209 COUNTRY GENTLEMAN, inquires about growing oats upon sward land, to be followed with corn, in order to get rid of the grub which proves so destructive to the starting corn. Having for several years been annoyed by this pest to the corn crop on sward land, about ten or twelve years ago I changed my rotation by sowing to oats first after breaking the sward instead of corn, and with good success.

I plow in the fall with the double share plow ten to twelve inches deep; in the spring, early as possible, make it fine and mellow as possible with the two-horse cultivator, sow with oats two bushels to the acre; harrow and cross-harrow, and then roll down with a log-roller. I have never failed of getting a good crop—not less than 45 bushels to the acre, and have had as high as 67 bushels. If the crop is got in early, it will escape the rust; if late, it is very liable to a blight by rust. The first spring work I do after the soil is dry enough to work, is to get in the sward oats. It is very important that it should be done early; the crop will be heavier besides the advantage of escaping the rust. The soil I cultivate must be very similar to that of W., which he says is on the Mohawk flats, mine being upon the Connecticut flats. Now a word as to the depth of plowing. If W. has never plowed his land deeper than six inches, it is hardly necessary for me to say that he should not at once go more than two or three inches deeper should he be desirous by way of experiment to deepen the soil, for it would throw up too much of the new soil for the first crop. I think he might with advantage deepen two inches more the second plowing for his corn crop, and the like again the third plowing for a grain crop when seeding to grass.

These grain crops might not be any heavier the first time round by this increased depth of plowing; but it will hold longer in grass, and when it becomes expedient to take up the same field again, it is of decided advantage to have a soil rich and productive to the depth of twelve inches rather than half that depth. At least this has been my experience on the alluvions of the Connecticut. It will yield grass at the the rate of three tons to the acre for two years, and from one to two tons for four years more. No doubt the Mohawk flats will yield fine crops with a depth of five or six inches plowing, but in a long run it will pay to deepen that soil, rich as it naturally is, and were I the owner of any portion of it, much or little, I would try the experiment.

A soil that will turn up rich and black ten to twelve inches deep cannot otherwise than produce bountifully. When passing up and down the canal thirty years ago, on those pleasant packet boats that were then thronged with passengers, I remember well of feasting my eyes upon the broad expanse of the German flats upon the Mohawk, a sight, rich, beautiful and lovely in the extreme; a favored region is the Mohawk valley, and though the alluvions there are more extensive than here, it seemed to me from the similarity of the soil, the scenery, and the surroundings, that the Mohawk and the Connecticut were twin brothers. J. W. COLBURN. *Springfield, Vt., Sept.* 30.

APPLES OF HIGH QUALITY.

"Will the COUNTRY GENTLEMAN give me the names of the best half dozen apples for table use, of the finest and best quality, without regard to marketing. One for summer, two for fall, and three for winter? W. W."

The *Early Joe* is doubtless the one for summer—the Summer Rose is much earlier, and although very delicate, crisp and agreeable, is not equal to the Early Joe, and is rather too small to please many.

Among *autumn* sorts, the *Dyer* undoubtedly stands first—it is very rich and juicy, and at the same time, of delicate texture. For the other autumn sort cultivators would be divided between the Autumn Strawberry, Hawley, and Fameuse,—all of them very agreeable table apples, but not equal to the Dyer.

For *Winter* varieties, the Melon is the general favorite among a large number—the Pomme Grise is extremely delicate, almost like a pear, but small; while the Swaar, although less delicate, is nearly unequaled for richness. Some will be unwilling to omit the Red Canada, or Wagener, or Northern Spy, or Newtown Pippin.

PAGINATION INCORRECT

A CHEAP AND GOOD COLD GRAPERY.

[Some time since, a correspondent requested a plan of a cold grapery, combining cheapness of structure, and economy of management, with success. Believing that many of our readers would be glad to see such a plan as would enable them to enjoy a good supply of fruit, scarcely liable to the disasters of seasons when raised under glass, our correspondent JOSIAH SALTER, of the firm of BISSELL & SALTER, Rochester, who has had extensive and successful experience, has kindly furnished at our request the following:]

Pray forgive my seeming delay in answering your favor of 26th August. My time has been very much occupied of late.

You say a correspondent inquires for "the best plan of building a cold grapery, so as to combine cheapness, economy and utility." I herewith give you a rough sketch showing how a neat, cheap, durable and effectual cold grapery may be built by any ingenious carpenter. It is a span roofed house 24 by 24 feet, which can, of course, be extended to any length, retaining the same width and height. A house built 24 feet wide, 48 feet long, 5 feet high at eaves, and 10 feet high at apex, makes a well proportioned and good looking cold grapery.

A house of these dimensions, viz: 24 by 24 feet, will take 11 red or white cedar posts, at least 8 feet long—5 on each side and 1 for the middle of the end *opposite* the door; 18 pieces 2 by 4 pine scantling, each 12 feet long, for water table, plate, ridge pole, &c.; 18 pieces 2 by 4 scantling each 14 feet long for rafters; 12 pieces 2 inch square and 12 feet long for perlins; about 100 sash bars 1 inch thick 1½ inch deep with ½ inch tongue for bedding the glass in, and each 14 feet long; a few pieces of casing and capping for ends and ridge pole; 1 piece 4 inch square for pillar in middle of house to support the ridge pole; about 150 feet match boards, and if the border is entirely *outside* the house about 48 feet 2 inch plank to keep up the earth of the border. Tin gutters at $5.00, cistern at $3.00, cast iron pump and watering can with rose spout; about 20 boxes of 7 by 9 Oneida extra thick glass at probably $2.00 per box, 50 feet in a box. Paint and putty, &c.

I think this house could be built complete, not including border and vines, for $150.

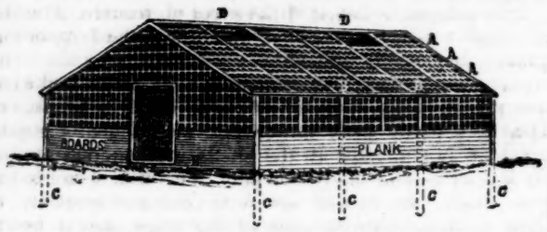
As good grapes, and of as fine quality, can be grown in this house as in the finest and most costly structure, and probably with more ease and certainty. This house will last, with a little repair, from 15 to 20 years, and produces 200 pounds of grapes yearly, worth fifty cents per pound. This is allowing a little less than 12 pounds to the rafter of 14 feet; a vine of this length will frequently give from 15 to 20, and even 25 pounds.

The *half* of this house, of course, would make a leanto, which should face the south; the whole a span-roof, which should run north and south, and face east and west.

You inquire, "What portion of a man's time, and for how much of the year, would be needed for its care?" The time needed for a house of this size would be merely nominal,—I should say one day in two weeks, from the 15th of April to 15th Nov., would be all that would be needed if it could be all put into whole days.

A good hand would do all the work of such a vinery in one hour a day, on an average, for weeks at a time; occasionally one whole day would be needed at thinning and pruning time. It is not the time taken, but the little attentions at all and at any time that may be required, and the knowing when and how and what to do, or the not knowing, which sometimes prevent or produce unfavorable results in graperies.

But pray let me discourage no one, for I know of no fruit so beautiful, so healthful, so luscious, and so pleasing to every one, that can be grown with so much ease and certainty, which may be cut fresh from the vine every day, in the acme of perfection, for so long a season as the grape. The grape may be had in perfection every day,



A. A. A.—Perlins,—which may be sunk into the rafters one inch. The sash-bars nailed on the perlins, at proper distance for 7 by 9 glass.
B. B. B. B.—Rafters.
C. C. C. C.—Cedar Posts.
D. D.—Ventilators.
E.—Ground level.—The lower part marked matched boards is 2½ feet, boarded up—that marked plank is two feet, planked up for the earth of the border to rest against.

The glass at the sides and ends may be upright sash-bars only; no thick pieces needed; the bars will be abundantly strong.

from the same vinery, for five months in the year. I have cut my first Dutch Sweetwater on the 28th of July, and my last Prince Albert on the 15th Nov., from the same cold vinery, and kept the latter variety in a dry garret until Christmas.

Even more than this can be done with some of the later ripening and long-keeping kinds, by the assistance of a gentle warmth from a hot-water pipe, to expel damp and frost during Oct., Nov., Dec., and January.

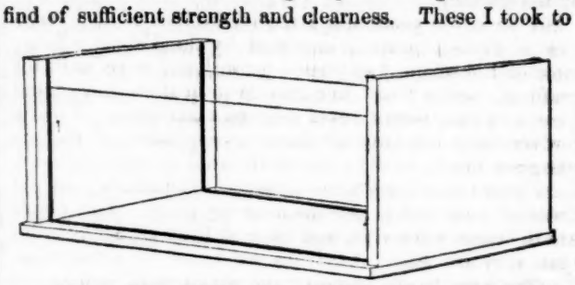
Allow me to ask what other ripe fruit can be had in perfection for so long a season? It will take all the varieties of peach and plum, and nearly all the varieties of pears, and I was going to say, all the varieties of apples combined, to furnish so much ripe table fruit without intermission for so long a season. J. S.

[For the Country Gentleman and Cultivator.]

THE AQUARIUM.

MESSRS. EDITORS—I notice in your last issue certain inquiries concerning aquaria from "W." As I have had some little experience in that line, I venture to submit it to your readers if you deem it sufficiently interesting to warrant its insertion in your valuable paper.

Last spring I took it into my head to get up a "tank," and set to work on my own hook, without suggestions, as I was not then aware that there was such a publication as that mentioned by your correspondent. My first move was to secure two of the largest panes of glass I could find of sufficient strength and clearness. These I took to



a marble yard, and left orders to have three marble slabs cut and polished, with groves cut for inserting the glass. The whole thing cost me in the neighborhood of $8. When I got this far I found myself in the same trouble as "W." appears now to be in. The marble dealer gave me a package of *plaster of Paris*, but this I soon found was no go, and I called on him for something better. He then gave me some *water lime*. This answered very well for a while, and I thought I was all right, until one day I put in a little too much water, and it all fell to pieces. I was discouraged. Then I heard of H. D. Butler's work, and at once secured a copy, but was disappointed in it, as "W" has been. At last I wrote to a correspondent in New-York city, who visited one of the stores in that city where aquaria are a specialty, and for the sum of 75 cents procured me a box of cement styled "*E. D. Davis' Aquaria Cement*," which I applied, and have since found to answer perfectly, for, with the exception of a little mois-

ture around one of the cracks once, which a renewal of the cement speedily checked, I have had no trouble. The cement must, I find, be kept shut up close in the box, or it hardens and becomes useless.

It is wonderful what amusement one of these tanks afford. I got a common *fish leaf* plant out of a brook, placed it in a small sized flower pot, with some of its natural mud, and *drafted* all the shells in the house to form a mound around the flower pot. The fish seem to think it a capital abode, and are quite tame and sportive. I should mention that the *bow* of the glass should be placed *in*, so as to counteract the pressure of the water. "W.'s" best plan will be to send to Messrs. Davis & Greenwood, 480 Broadway, New-York, and procure a box of the above cement, although I have not tried it on wood, and do not know if it will answer for that purpose.

Geneva, N. Y., Sept. 16. RURICOLIST.

[For the Country Gentleman and Cultivator.]

HARDY PLUMS.

MESSRS. TUCKER—In yours of Aug. 29, F. A. COLMAN asks, "which are the best six plums for his latitude." If Mr. C. is going to expend money in the purchase of plum trees, I hope his section of the country is more favorable to the growing of plums than it is here.

Seventeen years ago I procured a bundle of plum trees of Messrs. Breck & Co., Boston—six varieties. The trees were very fine, carefully taken up, and well packed. They grew well, and in due time blossomed. The first two years of their blossoming the curculio destroyed the fruit. The third year of their blooming, by jarring the trees two or three times each day for about two weeks, while the plums were in early growth, I succeeded in obtaining a large lot of plums; next year they again bloomed, but not so abundantly as in the previous year. By again jarring the trees and destroying the little Turk, I saved the fruit again, but in August the leaves on the trees began prematurely to drop off, and in a few weeks the trees were all nearly bare of leaves, the plums remaining—but they never ripened, and the trees never again put forth either leaves or blossoms; they were cut down as cumberers of the ground. Many others here have been alike unsuccessful in plum culture. The premature shedding of the leaves, the black wart, and the curculio, render all attempts to grow plums a precarious business in this section of the country.

Six or seven years ago, I received scions of two varieties of French prunes, imported by the Patent Office; most of the scions had turned brown, and were unfit for grafting, beside I had but little faith in their succeeding here, had they been in ever so good a condition. I had a few set upon the Canada plum; two or three of the scions grew finely, as did some distributed to my neighbors. Last year one of my trees produced abundantly, as did those of some other persons near my place. The plums are delicious when ripe, and have so little tendency to rot that they are easily dried, as we know by actual trial. The trees are hardy, standing the winter well, and as yet I have seen no "black wart" upon them. The tree that bore so heavy last year, again blossomed last spring, and now has upon it two or three dozen plums, larger than those of last year.

It is my impression that the "Prune d' Agen" will be found one of the best and most reliable plums we have; most of the scions of the prune here have been set in the Canada plum stock—the scion greatly outgrowing the stocks.

I have referred to the French Prune at this time, because in the Patent Office Report, 1854, it says—"among the cuttings of *fruit trees* which have been introduced, may be mentioned the "Prune d' Agen" and the "Prune St. Catharine," from France. They have both been extensively distributed, and grafted on the common plum tree in all the states north of Pennsylvania, itself included, and on the mountainous districts of Maryland and Virginia. From the success which has attended this experiment, there is much reason to believe that there will soon be produced from these and other varieties from Europe, a sufficient quantity of *dried prunes*, in those regions, to supply the wants of the whole Union. The amount of this class of fruit annually imported into this country, according to official returns, is valued at $64,568."

I should be very much gratified to learn the good or bad success attending the prune scions so liberally distributed through the agency of the Patent Office, in different sections of the country. If they have succeeded elsewhere as well as here, it is proper that the *public* should be made aware of the fact, because it is a matter that said *public* have an interest in.

By the many *slaps* at the Agricultural Department of the Patent Office, I have noticed in the public journals within the past two or three years, one would naturally suppose the *concern* was the veritable Pandora's box. Solomon, Dr. Franklin, or some other wise and benevolent personage, has said "you should give the De'il his due." Justice and common honesty require that much. Now within the past fifteen years, by the kindness of members of Congress from this and other states, I have received a liberal supply of Patent Office seeds, cuttings, &c., &c.; and justice to that office, here impels me to say most of the seeds received have proved good in quality, and many of them new and valuable varieties; and it has afforded me much pleasure to distribute them or their proceeds. And now, Messrs. Editors, I have told my story; if others have received worthless seeds, they can tell theirs. LEVI BARTLETT.

Warner, N. H., Sept. 12th, 1861.

LIME WATER TO PRESERVE EGGS.

"The best, and almost the only way to preserve eggs, is to put them in lime water. To make it efficient, the water must be as highly charged with lime as it will bear."

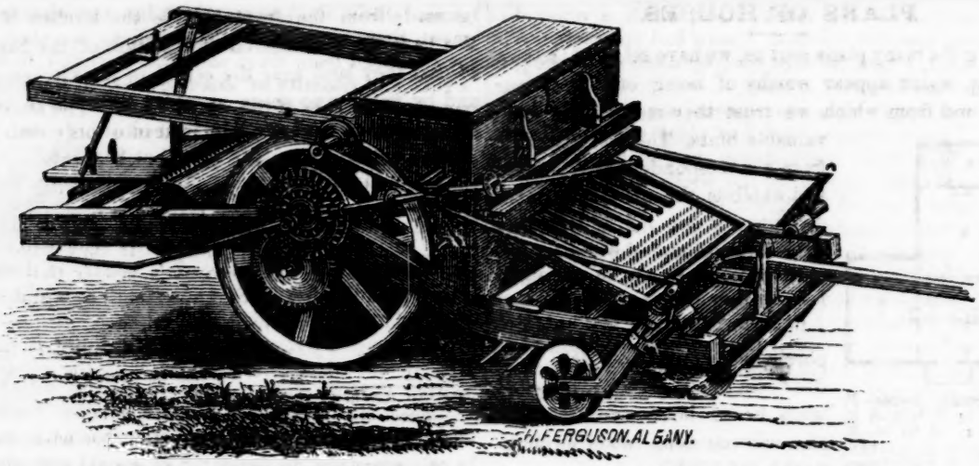
We cut this from a respectable exchange paper. Lime water is often highly recommended—but our own experience is, it is of little or no value. We have known most of the eggs to spoil in it, even if quite strong. The great essential requisite is to *place the eggs on end*. If this is observed, and they are placed in a cool room or cellar, they will keep well—whether in lime water, salt, sawdust, or ashes, or greased—if laid on their sides, the yolk will come in contact with the shell, and they will spoil in any case. It makes no difference which end is upwards. We knew two housekeepers dispute this point—one insisting that the small end should be up, and the other the large end—both were right, and both very successful. A good contrivance is a cupboard with shelves a few inches apart, bored full of holes, whose diameter is a fourth of an inch less than the egg—they will set end up in these holes, and be very easily placed in and removed. Salt is often recommended for packing them in, but it is liable to harden, so that the eggs cannot be removed without breaking.

[For the Country Gentleman and Cultivator.]

Experiments with Varieties of Wheat.

LUTHER TUCKER & SON—We have been experimenting on the different kinds of wheat for the last few years, and have settled down on the Soule or White, and Mediterranean, as the best varieties for us in this region. We tried last season about three acres of May wheat, and thought at the first of the season it would do well, and after weeding it that it would be our seed for next year's sowing. At harvest we found it was not what we wanted; the straw was soft, and the heads small. This fall we are sowing the White and Mediterranean, and if we can get the seed clean, think it the best. We have found an unusual amount of chess or cheat in all wheat this summer. We threshed about one hundred bushels for seed, out of which we took thirty bushes of cheat. CALEB LEE.

Allegany Co., Pa.



DUANE'S SOD SEEDER AND BROADCAST SOWING MACHINE.

The above cut shows this machine to very good advantage. It presents much that is new and very ingenious in its several parts, and altogether forms a combined cultivator, drill or broadcast sower, drag, roller and manure-distributor, in a single implement. To perform all these operations at once, if it can be satisfactorily accomplished, will not only save much time and labor to the large grain-farmer, but will also avoid a great part of the treading of the land by teams, and facilitate the putting in of the seed when the soil is in the best order for its reception. Among its more prominent features possessing the promise of utility as well as considerable novelty, are: the form of the cultivator teeth, to avoid obstructions and lessen the draught required; the power of sowing any kind of seed and regulating the quantity, by very simple but apparently effective contrivances; the position of the drag-teeth following, by which, it is claimed, they keep down at their work without being heavy enough to add materially to the draught; and the cylinder from which the plaster, bone-dust, or other fertilizer is distributed, with its vibratory movement to prevent their packing, or any failure to be regularly given out. The horses being in advance of the machine there is in fact no passing over the land after it is seeded; the seed falls close to the ground, so that a high wind will not affect its even distribution; the only labor for the farmer is to fill the seed-boxes and drive the team; if the field is an inverted sod, the sod is not disturbed; and finally, its whole work is said to be done without any more labor for the team than would be involved in a single plowing of the ground.

We have examined the model and the machine itself, and have no hesitation in commending it for the valuable features above alluded to, and others which we have not room to describe at length,—to the attention of all who farm on a scale of sufficient extent to render the purchase of such an implement a matter of economy. It is thought by Col. DUANE that it can be manufactured for about $150. It was tested with some care by a Committee appointed for the purpose at the Watertown State Fair, and upon a field which was not of the most favorable kind for its successful operation. We quote the report of this Committee at length:—

The Committee to whom was referred the newly invented implement for putting in crops, entered as a Sod-Seeder and Broadcast Sowing Machine, by John B. Duane of the city of Schenectady, report the following facts to the Executive Committee of the New-York State Agricultural Society.

The said implement was put in operation at the plow-grounds of the Society this day. A sufficient quantity of ground was plowed by order of the Society to test this instrument, and others if presented. We wish to state the fact that the ground was in an unfortunate condition for a fair trial of implements, as the soil was a hard baked clay, and broken into lumps. The inventor of the implement having full confidence in its working properties, entered on its trial, and the result seemed to justify it. The machine proposed to cultivate the ground, by a new from of cultivator-tooth; to sow any kind of grain; to cultivate or drag the seed in at the option of the farmer by simply turning a guide-board, or to do both combined; to sow clover and timothy seed; to roll the ground, and to sow the plaster, or any of the concentrated manures, all at one time, by once passing over the ground, and with one pair of horses, and but one attendant or driver, who rides behind the implement.

The seed selected was *Oats*, one of the most difficult seeds for machine sowing. After witnessing the operation of the machine for a sufficient length of time to satisfy us, we came to the following conclusion: That notwithstanding the condition of the ground it accomplished all the objects proposed for it, in the most successful manner; that is to say, the grain was perfectly covered, the ground over which it passed was thoroughly pulverized by the cultivator—a fine toothed drag—and the roller. The plaster was distributed behind the roller in free flow—the seed flowing down an inclined vibrating apron always in sight, and apparently free from choking. The draught was tested by the Dynamometer and was found to be about an average of four hundred pounds. This ease of draught seems to depend in a machine accomplishing so much, on two or three important considerations, viz: the cultivator teeth which are knife edged, and gradually lift the ground, not packing it forward as with the ordinary cultivator teeth; to the peculiar form of the drag teeth, and more essentially to its being balanced as evenly as possible on a central roller, leaving no work or bearing for the forward or castor-wheels to do, except for regulating the depth and easy turning of the machine, and which turns as easy as a cart.

In conclusion, we think the machine eminently practical as a new implement in farming, and recommend it to the consideration of the Executive Committee as an advanced step in labor saving implements.

All of which is respectfully submitted.

M. C. REMINGTON, JAMES PARKER, JOHN ADAMS, } Committee on the trial of Implements.

Watertown, Sept. 18, 1861.

An ounce of essence is worth a gallon of fluid. A wise saw is more valuable than a whole book, and a plain truth is better than an argument.—*Haliburton.*

Quoth Patrick of the Yankee—'Bedad if he was cast away on a desolate Island, he'd get up next mornin' an' go round selling maps to the inhabitants.'

PLANS OF HOUSES.

Among the many plans sent us, we have selected the two following, which appear worthy of being offered to our readers, and from which we trust they may derive some valuable hints. The first (fig. 1) is from a correspondent at Waltham, and exhibits the plan of a small dwelling, or one for a person of moderate means, and which may be built for ten or twelve hundred dollars. It is one and a half story, and cellar under the whole. A small porch may stand over the front door, or there may be merely a large broad hood over it. The plan will not need much explanation besides the references. A door under the higher part of the stairs opens from the entry into the kitchen; and thus access to every principal room is obtained from the entry. Two doors and two windows, placed on opposite sides of the kitchen, give plenty of light and air. The second story contains two bed-rooms over the parlor, and another over the sitting room. The space over the china closet and kitchen-jog is divided into two closets. If the kitchen is built as high as the rest of the house, as suggested, the chamber will afford two bed-rooms, requiring small separate stairs. The height of the first story is proposed to be 10 feet—9 feet would do for a house of moderate pretensions.

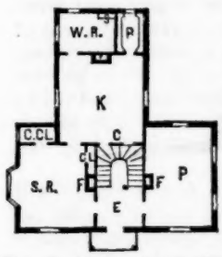


Fig. 1.—Small house—P, parlor, 12 by 19 feet—S R, sitting-room, 12 by 14—E, entry, 8 by 14—K, kitchen, 14 by 14—W R, wash-room, 9 by 9—P, pantry, 5 by 9—C. Cl., china closet—Cl., closets—C, cellar door—F, flues—S, sink.

The other plan (fig. 2) was sent by C. W. SPALDING, from St. Louis, and represents a house which he intends to build, and the plan is offered for criticism. It is a very good one, but the one here engraved varies a little (as suggested) from the drawings sent. As furnished us the plan represented the pantry on one side, and the bath room on the other, as additional buildings set in the two corners formed by the kitchen and main body. We have included both in the kitchen wing, thus simplifying the building, and avoiding so many receding corners and projecting angles. In order to avoid the inconvenience or evil of making the pantry a passage way from the dining room to the kitchen, the shelves are all closed by panel doors, so as to form close shelves of every part, thus shutting out sight, dust, and all intruders. We have found this arrangement, from experience, to be an excellent one. This also excludes sight from one room to the other in a more perfect manner than by interposing a small entry, as in the plan sent, and it saves room besides. By taking 15 inches each from the pantry and bath room a passage may be made from the front hall to the kitchen if desired. We have likewise altered the position of the back stairs, so that they land near the centre of the kitchen chamber, and by wasting no space as entry, give three bed-rooms for hired men or domestics, instead of only two, as in our correspondent's plan, and save much circuitous travelling to get to them. The passage down cellar starts from under these stairs, but turns to the right, or under the bath room. The bath or dressing room is accessible both from the bed-room and back entry, and by a slide or small door from the kitchen. "This room is also designed," observes our correspondent, "for use as a gentleman's dressing room into which a friend or visitor can be taken without passing through other rooms in the house. In this room can be deposited overcoats and unbrellas in wet weather, and here would be kept clothes and shoe brushes, and other conveniences for making a gentleman's toilet, including, of coarse, a wash-stand.

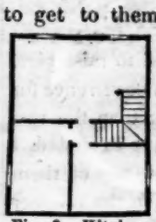


Fig. 3.—Kitchen Chamber.

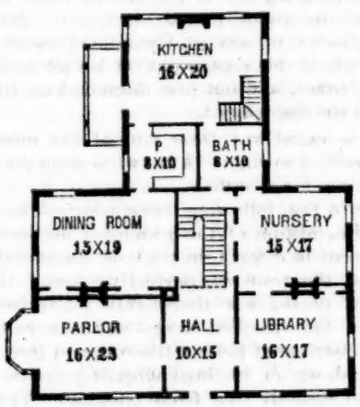


Fig. 2.

"The space allotted to the chimneys should be two and a half feet; this will give depth to the closets adjoining the chimneys. You will observe that a flue is provided for a hall stove. If a furnace is used, this might be omitted. There is a partition with a broad arched opening or passage way dividing the hall from the principal staircase.

"In all the bed-rooms the windows have been so arranged as to provide a place for a dressing bureau *between two* windows, for the purpose of giving light from both directions."

These windows thus placed on each side of the bureau, are a convenience, but they destroy the exterior appearance of the dwelling by giving it a sort of cotton-factory air from their great number. Many will prefer but one window to a room on this account.

We are unable to furnish the plan of the second story, but may merely observe that it is quite similar to the first floor, in the main part, except in the large closets added to the bed-rooms made by taking off a few feet across the inner ends, and in placing the attic stairs over the front or entrance hall. The following additional quoted remarks serve further to explain the object—the *dressing closets* should not be forgotten, they are neat, convenient and valuable:—

"Several of the sleeping rooms are provided with closets of sufficient depth to serve as small side rooms for the purpose of receiving a wash-stand, so as to take this necessary convenience *out of the bed-room* and off the carpets. Room will be found under the attic stairs for a linen closet. An unfinished attic is designed in this plan, to be used in winter for drying clothes, and for storage, &c."

[For the Country Gentleman and Cultivator.]

HOW TO PICKLE CUCUMBERS.

EDITORS Co. GENT.—A late number of your valuable paper contains a receipt for pickling cucumbers which is doubtless a good one; but as all housewives however "notable" each may be, have their own favorite methods of cooking, &c., I will give my mother's plan for having pickles always ready for use.

Cut the cumbers from the vines, wash them in cold water, and place them in an earthern jar. Put salt enough to make a strong brine into boiling water and pour on them; repeat this three successive mornings, and the fourth cover them with cold vinegar, adding a small quantity of mustard seed to prevent moulding. They will keep the whole year.

Clinton, 9 mo. 15. L. S. G.

[For the Country Gentleman and Cultivator.]

PIGS—THE RUNT, OR THE TITMAN.

"Oh, much abused and much despised beast!
Men slight thee most who know thy merits least;
Who would make LIGHT of thee, should TRY thee first;
Then, with thy praise, they'll inter-LARD their verse.
Without thy presence at the festive board,
Tickling the palate of creation's lord,
In bake, or fry, or even in a STEW,
Pray what could we, or our good housewives do?"
[J. C. MILNE.

Those farmers who have been accustomed to raise pigs, doubtless know that it is not an uncommon occurrence for one pig of a litter to be very much smaller than the rest of them; and so far as my observations have extended, I believe that when a sow has a large litter, one of them will usually be a *titman*, or *runt;* and when the number of pigs exceeds the number of teats of the dam, every supernumerary pig will be a runt, and cannot be raised with the other pigs. It is a rare occurrence that there are two runts in a litter, although I remember of once seeing two in one litter; and in this instance the sow had two more pigs than teats. Of course, they survived but a short period of time. But the number of runts seldom exceeds one. In case, however, a sow has as many pigs as she has teats, *besides* the runt, it is always best to kill it at once, or give it to some one who is willing to endure the trouble of raising it by hand. But when there is a teat for it to suck, it will live, and grow with the others, but will usually be somewhat smaller than the rest.

Some men contend that every little pig will suck his own peculiar or respective teat, and no other; those that ought to suck the forward teats will always suck them, while the hindmost teats will always be sucked by those that are never allowed to suck any others. Some contend also, that the *best* pigs—not only the best for form and symmetry, but the best for *breeding*—will always suck the *forward* teats; and that although there may be no perceptible difference in all the pigs of an entire litter, from their birth until they are weaned, still those that suck the front or forward teats, are better blooded, and will transmit their good points to their progeny with more unerring certainty than any others of the litter; while those that suck the hindmost teats should never be kept for breeding purposes, as their progeny will be more liable to degenerate, especially when breeding in-and-in is allowed from year to year.

This theory was advocated to a certain extent, more than three hundred years ago, for we find in Thomas Tusser's Five Hundred Points of Husbandry, this couplet among his directions for the improvement of swine:

"Ungelt of the best, save a couple or more,
A sow pig and boar pig, that sucketh BEFORE."

I called at the residence of an extensive farmer in the county where I am now residing, whose sow had a large litter of very nice pigs, apparently about two weeks old. When I first saw them, they were all sucking, and there was just as many pigs, besides one runt, as there were teats of the dam. The runt was the most pitiable and forlorn looking apology for any animal of the genus Sus that I ever beheld. It was not as large as a rat of ordinary size, and was feeble, scurvy, and had hardly strength enough to move about, although it was making a great effort to find a teat above the other pigs. The proprietor was allowing it to live "in order to see what would become of a titman without a teat."

One would suppose that it might obtain enough milk to keep it thriving, when the others were not sucking. But as the sow has complete control over her milk, and will not "give down" unless in a recumbent attitude, the little fellow could steal barely enough to keep him alive. Humanity would dictate that it should be killed at once, as it cannot possibly survive long.

I am somewhat in doubt about the truth of the theory, that every pig sucks *always* its own peculiar teat. I have known it to be correct only in part; although as a general rule, I believe it is true, and that the "*titman*," or runt, always sucks the hindmost teats.

There is one fact, however, connected with this subject about which there is no uncertainty, which is, that a sow will not usually continue to give milk out of more teats than there are pigs to suck, allowing one to each teat. If a sow give milk for and suckle ten pigs, and the number of pigs be diminished even to one, or to any other number, she will usually give milk after a few days, out of only as many teats as there are pigs to suck. Therefore, if a sow be allowed to raise only one pig, it will be seen that there is but one teat that will afford milk; and if two good pigs and a runt be allowed to suck, the runt will almost always suck the teat *behind* those sucked by the other pigs.

I believe it is allowed, also, that a female titman will never have as many pigs at a litter as one that sucks before, or is not a runt or titman. S. EDWARDS TODD.

[For the Country Gentleman and Cultivator.]

BEARDED vs. BALD WHEAT.

EDITORS CO. GENT.—In my remarks upon wheat in the CO. GENT. of Aug. 29, I stated that seven of the varieties I forwarded, "are White Bald Wheats." I have known of no other varieties of winter wheat being grown in this section of the country. I also forwarded three varieties of bearded wheat. These were grown only in small quantities in drills, as were some of the bald varieties. In describing Nos. 11 and 12, I gave it as my opinion that they were each, probably very productive sorts, and not so liable to injury from midge, birds, &c., as are the bald varieties. This opinion was formed from a careful examination of the various kinds during their growth, and in their yield when harvested. I do not reccollect of ever hearing or reading anything previously, in favor of bearded over bald wheats in respect to yield, or less liability to injure from rust, midge, birds, &c. But it seems that in Maryland, the farmers or planters give the bearded varieties of wheat the preference, and what is true there, may also be true elsewhere; at least it may be well for farmers to test the thing by actual and careful experiments. I am in hopes to satisfy myself in these matters another season, having sown a great number of sorts, *bearded* and *smooth* wheats.

Some over a year ago, I forwarded to Col. A. G. Boyd, Hancock, Md., samples of five varieties of winter wheat, which he sowed in Sept. 1860. A day or two after I forwarded my communication (dated 15th Aug.) I received a letter from Col. B., in which he says—"All the varieties of wheat sent me last fall, I observe, are smooth, (bald:) There is existing among our farmers a prejudice against smooth wheat, and I am beginning to be of the opinion that it is not without substantial reasons. Certain it is that our smooth varieties are more subject to the ravages of the fly and other insects, and to the elemental diseases ncident to the wheat crop, and yield little or nothing, whilst the bearded varieties, with but few exceptions, escape the insect and these diseases, and yield remunerative crops."

In this section, both the bearded and bald varieties of spring sown wheat have been grown ever since I can remember. The bald sorts have been preferred by many farmers, upon account of their being more easily harvested, and not yielding so large an amount of chaff, beards, &c. But if by actual trial, the bearded is found to be the hardiest, most productive, and less liable to injury from insects, birds, &c., then it would seem more profitable to grow the bearded—notwithstanding its greater amount of chaff, long awns, &c.

Col. Boyd has given us his views upon this important question; will other wheat growers, in different sections of the country follow his example and give through the columns of the COUNTRY GENTLEMAN, the result of their experience and observation? "To communicate and do good," is a duty devolving upon all—and more especially among that great brotherhood, the tillers of the soil.

Warner, N. H., Sept. 11th, 1861. LEVI BARTLETT.

[For the Country Gentleman and Cultivator.]

MOLE POWS.

EXPERIMENTS WITH, IN MADISON COUNTY, OHIO.

Believing, as I most assuredly do, in the doctrine of your "ditcher king," JOHN JOHNSTON, Esq., that *most* soils require some system of under-drainage to remove surplus water, and also believing that our "Madison Co. Mole Plow" drains are just as *effectual* and *lasting* as the more expensive "tile," in all soils of a clayey or compact subsoil; and also being firm in the belief that agriculturists of your and other States, only desire *proof* that these "mole drains" are just as effectual and desirable—much more economic—easier and quicker made, than any others, to induce them to adopt this system of drainage, I beg to offer a few *facts*, the result of experiments of some of our best farmers, assuring your readers that the statements as given may be relied upon as correct.

Citizens of our county have invented and patented within the past three to five years, some *seven* different machines of this class. We have also introduced from Illinois—previous to inventions here—some two or three others. We doubtless justly claim precedence over any other county for the *number* of machines of different invention of this class, and having had abundant evidence of their operations and merits, our intelligent farmers are well prepared to offer reliable testimony and results to other sections not equally favored.

And I offer as their testimony regarding to the mooted point, durability, that those drains *first* constructed, nearly *four years since*, have been constantly improving; discharging more regularly and freely than at first, instead of "filling up" as prophecied by many in the induction.

Permit me to give the experiments of two of our most reliable men.

W. WITHROW, Esq., of this county, has now in operation full 5,000 rods—say 16 miles—averaging in depth about 33 inches—one *single drain* nearly 125 rods in length, made nearly *three years since*, which discharges freely—constructed a part of his drains in winter, remainder in spring and fall.

Mr. W. considers a fair day's work for two men and pair of horses, 100 rods, and that the cost does not exceed *five cents per rod*. He uses an improved machine, having a guage to regulate depth, and which also enables the operator to determine at a glance the *exact* depth of plow—also an additional improvement of a "capstan hoister," to raise plow out of ground by means of wheel and lever, instead of pulling same out by team, requiring a less amount of force, by *one-half*, to raise it, and move forward. The plow, complete, costs $150, at shop.

But the largest experiment made in this county, and perhaps in State, has been by R. ARMSTRONG, Esq. He uses the "Marcus and Emerson" Illinois plow. Mr. A.'s farm consists of some 1,250 acres, mostly low, level, black loamy soil, with of course but little fall. The drains lead into a stream on one side of farm, and through centre into large open ditches—previously cut by hand. He begun over three and a half years since—has made this year over 2,000 rods, and previous to this some 6,000 to 7,000 rods, or say full thirty miles. The *first* drain—cut nearly *four* years since, was about three-fourths of a mile, winding through lowest parts of prairie, and passing through a small knoll—discharges freely at both ends. His drains average a depth of some three and a half feet, none being under thirty inches—uses a pair of horses to wind up "cable-rope," and oxen to "pull out" and forward capstan—has made this year 160 rods per day, but considers 100 rods an average day's work.

An item in his drainage, shows that these drains are "very tenacious of life"—to use a *forcible* expression.

The first drain was a long one with but little fall; afterwards he concluded to adopt a different outlet, and cut some eight or ten drains at right angles to first, passing directly across first. Such must have been the fact, as all were run at an even depth.

The *first* long drain was considered spoiled, but in a short time begun to discharge, and has increased in volume, until now it runs freely and almost constantly.

Mr. A. considers cost but little, if any, higher per rod, than the estimate of Mr. W., above stated.

Now we claim that these mole drains, lasting thus long—from three to four years—will continue to remain as at present. We invite Mr. Johnston and others to show reason, if any they have to offer, why our assumption is not correct. We have seen them examined at outlet after being made some months and years, and have always found the *top* and *sides* as solid and firm as when made—no signs of crumbling or falling in.

We of Madison also claim for these drains some advantages *over* tile:

1st. They are more easily and cheaply made.

2d. Can be constructed at any time, when ground is not frozen hard.

3d. They permit water to enter, from top, bottom and sides, freely.

4th. They can be renewed—if by chance stopped up or deranged from craw fish or other causes, without taking up, as with tile.

5th. And to close reasons—though others are obvious and might be offered—thorough and efficient drainage is within the immediate *reach* and *means* of all clay subsoil farmers.

While we admit the "tile drainage" as preferable, in many, and perhaps *all* cases, if it could be constructed as easily and cheaply as "mole," the matter of *cost* is now, and must ever be, so great as to debar the farmers of small capital and energy from ever venturing upon the experiment, and of course from receiving the admitted beneficial results of a thoroughly underdrained farm.

It may be more judicious, in the long run—but I much question even this—for the farmer of abundant capital to use "tile" for drains; but to all others—possessing subsoils permitting its use—the "mole plow" will be found the *desideratum*, and this latter class need no longer hesitate to adopt the "Mole Plow," on the score of durability, as we of "the West," have well assured ourselves that this is not a doubtful, but a *fixed fact*.

I am assured that drains in Illinois are now in successful operation, constructed *ten* to *twelve* years since.

If from this lengthy communication, any of your intelligent readers are induced to discard "theory" and adopt "practice" in the use of "the Mole Plow," I feel assured they will reap beneficial results, and I shall not have written for nought.

"W."

Hickory Grove, London, Madison Co., Ohio.

IMPACTION OF THE CROP IN FOWLS.

Our domestic fowls are very liable to an enormous distension of the crop by food which, in the absence of secretion, and from the quantity accumulated, becomes hard and incapable of being moved from the distended cavity. The fowl lingers on without appetite, and manifesting great dulness, torpor, and progressive emaciation. Death soon puts an end to the case, and then alone, in the majority of instances, the enormous crop indicates the nature of the fatal malady.

Treatment.—In mild cases, this consists in pouring tepid water in the gullet, and manipulating the crop so as to soften its contents and press them back through the mouth or onwards into the stomach. In severe cases, no hesitation should be experienced in making a bold incision, evacuating the crop, and drawing the lips of the wound together by silver wire suture. The fowl must then be fed for a few days on materials which do not need to lodge in the crop, in order to be prepared for the action of the guzzard, and well broken down meat with sloppy bread and milk, are the best forms of food for it.—*Prof. Gamgee.*

MARKETING POTATOES.—Solon Robinson says that farmers would save one-fourth of their price by separating the large from the small before sending them to market, the small potatoes only fill up the interstices and lessen the value of the whole, while when separated, the large ones bring a better price and the small ones left are of considerable value.

Design for a Working-Man's Cottage.

A design is here presented of one of the larger and more complete workingmen's cottages, or which may be built as a cheap farm house for a small family, where some taste of exterior is an object, (fig. 1.) The points in which it excels some of the larger plans already given, are the entries for both front and rear door, a wing furnishing pantry and wood-house, and a portico, which is surmounted with a small balcony, entered from the upper passage through the glass door. There is also a large amount of closet room up stairs, in which may be neatly packed away much of the material that is commonly thrown

Fig. 2.—Principal Floor.

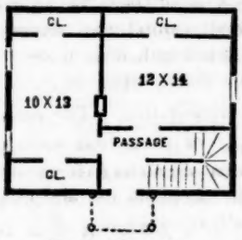


Fig. 3.—Chamber.

promiscuously in garrets; while the rougher articles of this class may go to the wood-house chamber. By making the wood-house a little longer, a greater length may be given to the pantry, and the back entry may then be made large enough to receive the cooking-stove in the heat of mid-summer, the smoke being carried up into a brick chimney built for this purpose. This chimney need be carried up to but a moderate height above the roof if surmounted with the cap represented by fig 4.

Fig. 4.—Chimney.

This design is remarkable for its compactness of arrangement. The front entry is smaller than would be practicable, but for the room given in the stairway. The lower portion of the stairs being under the lowest part of the roof, do not occupy valuable chamber room. The same economy of space is observed in the places assigned to the upper closets. The single chimney may be made to warm every room. The front bed-room may be made, if desired, to open into the front entry, instead of into the living-room. It will be an advantage which many may deem valuable, that the two rooms above mentioned may open either into the living-room or out of doors by the front and rear entry.

The cost of this house, well built of wood, with a cellar under the whole, would be six or seven hundred dollars—but by finer material, slight enlargement of the rooms, and better finish, it would cost a thousand.—*Tucker & Sons' Illustrated Annual Register.*

Plaster and Manure.—"If," says a writer in Field Notes, "a farmer neglects stable and yard manures, and attempts to make up the deficiency by the use of plaster, the latter will soon fail him, for this mysterious mineral needs vegetable remains in the soil to enable it to act efficiently. In other words, it only helps a soil that is able to help itself."

Strawberries---Cheapest Mode of Raising.

We remarked many years ago, to the surprise of some hearers, that as many bushels of strawberries could be raised on an acre as potatoes; and that they could be furnished ready to pick at a cost of not over 25 cents per bushel. Wilson's strawberry has been raised on two-thirds of an acre, at the rate of 400 bushels per acre—200 are more frequently accomplished. But few crops of potatoes come up to this. The yearly labor for a 200 bushel crop need not be $50.

There are many ways of raising strawberries. A common one is to set out the plants a few inches apart, which renders the labor many times more than is needed, one by three feet being near enough; they are perhaps kept clean until they have borne one crop; and then runners soon cover the surface, variously mixed up with grass and weeds. In two or three years, the owner concludes that he has "bad luck"—or that strawberries "cost more than they come to;" or that "they are a humbug."

We have examined various modes, and are satisfied that the cheapest and best for field culture, where land is not very costly, is the *alternate system*—or planting this year, and cropping next,—thus obtaining five acres of the berries from ten acres of land devoted to the fruit. Every strawberry-raiser knows that when clean and continued hill-cultivation is given, that *one* crop is always larger than the rest, which is the second year. The plan here proposed is to have no other than this largest crop.

First, prepare the land perfectly; that is, have it fine, sufficiently rich, and especially and indispensably, have it clear of all foul weeds and their seeds. This should be as early in spring as practicable. Then proceed to plant by a long well stretched line—put the plants in with a dib, such as nurserymen use for root-grafts—they may be thus planted with great rapidity; an active man will plant out 5,000 a day—perhaps more. If the rows are four feet apart, and placed 20 inches or two feet apart in the row, there will be about 6 or 7,000 plants to an acre; that is, two men will plant ten acres in less than a week. Now, observe how much easier this is, than to cultivate and hoe, and hand-weed ten acres of strawberry plants of two or three years standing.

The first year, cultivate them frequently with a horse. If the land is clean, according to one of the requisites, they will need but little hoeing, and the runners will have filled up all the desired space in the rows. They are now ready for a heavy crop next year.

After bearing, the weeds would begin to increase rapidly. This is obviated by simply plowing in the whole plantation.* If the same land is intended for another crop, manure it properly with compost, as the soil may require, and prepare it by mellow cultivation for planting the following spring. Two fields, or two portions of the same field, will thus keep up a regular supply by alternately planting half each spring. Twenty acres devoted to strawberries would thus give ten acres of berries every summer; and if productive sorts are selected, such for example as the Wilson, the ten acres would yield two thousand bushels. If worth five cents a quart on the plants, the whole yearly amount would be three thousand dollars from the twenty acres.

It is probable that the one heavy crop would be nearly twice as great as the average of several crops on a plantation continued several years; and if so, about as much

* Reserving enough for planting.

would be obtained in this way from the twenty acres, as if the whole were kept bearing. The cost of planting, as already shown, would be not over ten dollars yearly; the cultivation by plowing up the whole surface, would be many times easier than horse and hand-weeding.

The actual cost, before picking, would be about as follows:—

Interest on 20 acres,		$100
Annual planting,		10
Do.	plowing, harrowing, &c.,	25
Do.	manuring, (may vary greatly,) say,	100
Do.	cultivating the rows, say,	20
		$255

Six mills a quart (20 cents per bushel) would more than pay all this expense, if 150 bushels were obtained from an acre. If any of these figures are wrong, they may be corrected by any one to his own satisfaction, *if he has tried this mode of culture*, and is not acquainted with the weedy slip-shod method only.

FARMING IN WAYNE COUNTY, INDIANA.

Brief Editorial Notes.

Making Sorghum Molasses.—The country surrounding Richmond is one of the finest and best cultivated portions of the West. In external appearance—in woods and fields, dwellings and outbuildings,—it would be scarcely distinguished from the more level parts of Western New-York—the fields of tall corn, being the first point of difference that a stranger would observe. The soil is very fertile and almost wholly free from stones. The forests consist largely of oak, beech, and maple, and at the present time are brilliantly variegated with the rich crimson foliage of the sour gum and the softer shades of ash, maple, and tulip tree. The leaves of the corn were killed on the 28th with frost—a part is topped and a part cut up at the roots. It is the most important crop, and the average product is greater than in New-York—or about fifty bushels of shelled corn per acre, sixty to seventy among the better farmers, and one hundred and thirty have been raised. Wheat is hardly as productive as with us—oats about the same. The usual rotation is corn, oats, wheat, grass. The manure made by animals is applied to the corn. It is not unusual to sow wheat among standing corn, and to cover it by running the shovel-plow between the rows, leaving the surface rough or ridged, but the best crops are not obtained in this way. Weeds generally are extirpated, and farms present a neat appearance. A few cornfields were observed as clean as a floor. Land is from sixty to one hundred dollars per acre, within two or three miles of Richmond.

A more general cultivation of the clover crop, for improving the quality of the soil, would add much to the profits of farming in the long run.

The forests present a heavy growth of good timber. A hundred cords per acre are not unusual.

I have visited a few manufactories of *Sorghum molasses*, conducted on a moderate scale. One of these employed three hands and one horse, and would make about 25 gallons in a day. Two horses would have made more. The stream of juice from the grinding-mill was about half an inch in diameter, and was of a light pea-green color, from the amount of small fibrous and other foreign matter derived from the stalks. The rollers were metal, and pressed the stalks so closely that they passed off nearly dry and like shavings. Cattle were eating a portion of this refuse matter. The fresh juice was boiled down in shallow pans. No substance was added—the molasses being simply boiled juice, well skimmed during the process. From one to two hours were consumed in thus changing the juice to molasses; the skimming being continued throughout. The scum is green, and consists of the fibrous and other matter already mentioned. One cord of wood makes one hundred gallons of molasses, and the whole process, after the stripped stalks are drawn to the mill, is performed for 20 to 25 cents per gallon. The wholesale price here is 50 cents per gallon—an acre will average about 200 gallons, and consequently will yield 40 dollars or more for the labor and expense of raising and harvesting,—the cost of the latter, including the previous stripping of the leaves, being the principal part, and about three times as great as harvesting common cornstalks. The value of the leaves for fodder does not pay the expense of stripping them off.

Another manufactory, belonging to A. Mendenhall, was of a cheaper character, being merely intended for his own private use. The rollers were of wood, turned accurately, and working with iron gudgeons, and having iron cogs on the ends of the rollers, to give the proper motion. The rollers are set vertically, as usual. The cost of this grinding apparatus, which is worked by two horses, was about 20 dollars. It grinds two or three cords a day. It does not press the juice out so closely as those with metal rollers, about one-fifth being left with the stalks, but it is purer, and has less of the green matter. As a consequence, less skimming is needed, and the whole process is completed in half an hour. As all are aware, the juice should be boiled when fresh—a few hours are sufficient to cause fermentation. The pans are home-made, and consist simply of sheet-iron with plank sides, the sheet-iron being bent up so as to form the ends of the pan, and are secured to the plank by two thick rows of nails—the fire-place is a little narrower than the pans. A cord of wood boils down the juice for 80 gallons of molasses. Last year, six gallons of juice produced a gallon of molasses—this year it is not quite so rich, and eight or ten are required. Sorghum which grows on dry and poor land, although smaller in crop, yields a richer and better juice—in some instances twice as valuable as that obtained from the more succulent stalks on moist and rich ground.

Much of the sorghum raised this year has been diminished in value by allowing the seed through carelessness to become mixed with broom-corn.

The molasses has a distinct flavor, unlike both maple and cane molasses, better than the latter, and inferior to the former, but much liked by those who have become accustomed to it. But little, so far as I could learn, is offered for sale in market, farmers generally making it for their own home use. *Richmond, Ind.*, 10 *mo.* 8, 1861.

THE SILVER POPLAR

There are some owners of large ornamental grounds, that value this tree for its rich and silvery foliage, its extreme hardiness and vigor of growth on almost any soil, and for the short time required to obtain trees of large size; yet are obliged to reject it on account of its intolerable suckering. They wish to know if there is any way to avoid this difficulty.

We are informed that by digging up (not cutting off, as is the common practice) all the suckers a few times, they cease to reappear, if the work is well and thoroughly done. Will those who may try this remedy please report results?

EDITORIAL FAIR NOTES.

WESTCHESTER CO., Oct. 4.

On Wednesday I had the pleasure of attending the Hampden County (Mass.) Exhibition at Springfield. Unfortunately (for me) the show of Live Stock, with the exception of Horses, had concluded with the first day, (Tuesday,) so that for my knowledge of that part of the Fair, I have to depend upon others. The turn-out of Cattle appears to have been quite good—including Devons from H. M. Sessions of Wilbraham, Short-Horns from Phineas Stedman of Chicopee, and Ayrshires from Wm. Birnie of Springfield, and C. L. Buell of Ludlow. According to the statements of the Springfield Republican, "the Short-Horns predominated, as usual, 'only more so,' among the neat stock," verifying the statements I have before heard as to the growing popularity of this breed in the Connecticut Valley:—"It is twenty-five years," says that journal, "since Horatio Sargeant of this city, brought the first full blood Short-Horn bull into Hampden county; but it is only six years ago that Phineas Stedman introduced the first pure Short-Horn pair into the county, and now there are twenty owners of pure stock of that description, and over 100 unadulterated animals, within the limits of the county. Conspicuous among the Westfield Fat Cattle was a pair of four-year olds of Geo. S. Taylor's, weighing 4,500 pounds, the largest of them probably the finest animal of his years ever exhibited in the county, and also three pairs of Hezekiah Taylor, only three weeks ago bought by him in Middlefield."

The Show of Horses on Wednesday was quite a good one, including among other items a tandem team, in which a stallion was between the shafts, with his mother as the leader, and five or six of his get attached abreast, so as to make a very good exhibit both of sire and offspring. But the indoor departments of the show, which filled the City Hall, presented perhaps the most attractive feature of the whole; the Hall is an extraordinarily fine one, and the entries there included the following:—"Flowers 16, fruits 82, vegetables 75, household manufactures 31, worsted and fancy work, millinary, &c., 141, fine arts 44, bread 16, butter 7, cheese 7, mechanic arts and agricultural implements 67, grass seed 16, musical instruments 9." This exhibition, although not as full, I believe, as has sometimes been the case, was in many respects very good, and I can endorse the following remarks from the Republican:

Mr. Richard Bagg and Michael Dorne, neighbors and rival gardeners, of West Springfield, each made splendid exhibitions of vegetables, one entering 50 and the other 60 varieties. Of out-door grapes, Rev. Dr. Ide presented seven varieties, and the largest collection, and is strongly backed by John B. Stebbins; while of foreign hot-house grapes, H. J. Chapin (Massasoit farm,) and William Birnie made splendid displays, that of the former including six different varieties. In pears, Dr. Ide, Dr. Breck, (medicine treads closely on theology,) B. K. Bliss, Alden Hitchcock and James E. Russell of Springfield, and N. D. Parks of Russell, present numerous and excellent varieties. William R. Sessions of Wilbraham, had 40 varieties of apples; William H. Lyman of the same place, 13, and D. B. Merrick, as usual, a large display; and Col. Aaron Bagg of West Springfield, presents 20 varieties of fruit, mostly of apples and pears. Roger S. Moore of this city, shows a basket of fine apples, a specimen of 12 bushels from one tree—a brag crop for 1861. Cranberries and cranberry cherries are in unusual and cheering proportion, and potatoes are plenty and big enough to freshen up the Irish emigration.

To the above I should add that I have never seen finer platters of Delawares than those presented by Dr. IDE and Mr. STEBBINS, while the apples and pears were much more numerous than I expected to find them the present season. The vegetables were fine, as above stated, and our friend B. K. BLISS, in addition to many other valuable contributions, showed a very large assortment of potatoes.

At two o'clock the usual Dinner took place at the Massasoit, at which interesting and instructive remarks were made by Gov. ANDREW, Hon. MARSHALL P. WILDER, Rev. Dr. HITCHCOCK, Dr. GEO. B. LORING, &c. The Governor touched upon the associations of farm life and the patriotism of farmers; Mr. Wilder and Dr. Hitchcock upon Agricultural Education, and Dr. Loring related his experience in bringing a five hundred acre farm from exhausted-ness to fertility, with many anecdotes to enliven the tale. The hours passed by very pleasantly; there were seats for 150 at the tables, most of which were filled.

My thanks are due to President CHAPIN and other Officers of the Society, and many friends, for their kind greeting and attentions. I had a pleasant drive with Mr. BIRNIE, which I shall endeavor to report upon hereafter.

— Thursday I reached Flushing, arriving while the Queens County Fair was midway in progress—its indefatigable Secretary, JOHN HAROLD, Esq., by the same system and promptitude which characterize his arrangements as General Superintendent at our State Fairs, contriving to condense his County Exhibition wholly into *one day*. The address was put down for 12 o'clock, and coming in just at that time I accordingly found the officers on their way to the mammoth tent in which it was delivered, to carry out punctually the programme of the hour. This tent—140 feet by 75—was beautifully decorated, and sheltered an excellent display of fruit, flowers, vegetables, etc. Outside we had a ring active with the competition of well filled classes of Horses, including several celebrities, as well as many valuable animals from the ranks of private life; not very large Cattle and Sheep Departments, a considerable variety of Poultry, and some very good Swine, together with a good assortment of Implements. Mr. Aycrigg of New-Jersey was present with a large part of the stock shown by him at our late State Fair, but otherwise I think the exhibition was almost wholly made up in the County itself. And its character—as a whole—was not less creditable to the farms and gardens of the locality, than the large concourse of people present, was to the intelligence and enterprise of those who cultivate them. I regret that time will not permit that I should particularize at greater length. Few county exhibitions that I have seen were such as to do greater honor to the Societies holding them. There is much of interest to the stranger—particularly in Horticulture—to be seen at Flushing, of which I shall hope to chronicle some account when fortune may favor me with the opportunity of another visit. Mr. MEAD of the Horticulturist, and Mr. JUDD of the Agriculturist, were among the busiest of the spectators; Ex-Gov. KING and Hon. E. A. LAWRENCE, ex-presidents of the Society, Col. JOHNSON of Albany, and other prominent gentlemen were present, and the Address by R. C. MCCORMICK, Jr., was such as to interest all who were within hearing of his voice.

Leaving Flushing with E. G. FAILE, Esq., of West Farms, I came here with him the same afternoon, and have been spending to-day in quite a drive through the county, both pleasantly and instructively to myself. The necessity of mailing these hurried notes at once, in order to be in season for the next Co. GENT., must, unfortunately, preclude the farther extension of them at present. L. H. T.

"The Universal Clothes Wringer."

The above engraving exhibits a Clothes Wringer which we have had in our laundry for five or six weeks past, to the great relief and satisfaction of the family. It saves a vast deal of severe labor, and with it and our washing machine—(Wiswall's patent, made by N. B. Cady, West Randolph, Vt.,)—"washing day" has been relieved of most of its terrors. The "Universal Clothes Wringer" is thoroughly made and neatly finished—clasps firmly to the tub, as the cut shows. The rolls, (India rubber,) can be adjusted to admit the passing through of anything from a collar to a bed quilt. Set it properly for a sheet, and it will wring anything down to a collar with altering the screws. It is made by the Metropolitan Washing Machine Co., at Middlefield, Conn., M. W. Terrill, Esq., President.

Fruit Growers' Society of Western New-York.

The autumnal meeting of this Society was held at Rochester, commencing on the 1st of October—E. Moody, President of the Society, in the chair. There was a fine collection of Grapes, and some of the newer Pears on exhibition. A committee was appointed to report subjects for discussion, and while they were out the merits of the Virgalieu Pear, as an orchard fruit for Western New-York, were considered.

Varieties and Culture of the Grape.

Question 1.—What varieties of grape can be relied upon to ripen their fruit with certainty in Western New-York, in the open air?

P. Barry—We have been for several years testing new varieties of grapes. Many old ones are found not to ripen—the Catawba will not ripen in this latitude. This season has been very unfavorable for the ripening of grapes. The Delaware he considered would ripen well in all seasons—has ripened well this season, when nearly all others failed. The Hartford Prolific will always ripen well. The fruit, though of the second quality, is still a *pretty good* grape, and many will call it *good enough*. These two he would mention as being about the best he could name.

Dr. Miner of Honeyoye Falls, had ripened nearly the whole crop of Dianas uniformly for the past 5 or 6 years—was two or three weeks earlier than the Isabella. There is not over a week's difference between the Delaware and Diana.

H. E. Hooker thought the Diana did not ripen uniformly enough to be placed upon the list; there were generally some unripe grapes upon the bunch. With the Delaware there are no unripe grapes. With him he found the Delaware did so well that he had but little inclination to talk of anything else; he counted this morning on a trellis of 12 feet in length, over 200 bunches, and if it lacked in size, it made it up in quantity. Would give his unqualified recommendation; it was hardy and every way desirable. Hartford Prolific was good and early, but of second quality. The Concord he would recommend as being good and early enough for the climate. These three he would recommend as very hardy and early.

P. Barry some four years ago planted the Rebecca, Delaware, Concord, and Diana, upon the same trellis, and under the same circumstances. The first three are well ripened; the Diana is not ripe yet. He thought the Delaware a month earlier than the Diana.

Mr. Hoag of Lockport, had about 600 vines, which fruited the first time this year, on an as exposed a situation as any in the county. The varieties are Hartford Prolific, Concord, Diana, Perkins, Garagues, and To Kalon. The order of ripening was as follows:

The Hartford Prolific first—has cut about 1,000 lbs.—sold in New-York for 11 cents a pound; had no trouble about gathering on account of the fruit dropping. The Perkins ripened next; the vines loaded down with fruit—many considered the quality superior to the Hartford Prolific. The Concord has not grown as well as some of the other sorts; they are ripe, and have been for a week. The Garagues are nearly ripe. The To Kalons are nearly ripe, and are quite dark. He noticed that the To Kalon trained up to a trellis, did not kill back at all, though the Diana was killed back to the ground. Would recommend the Rebecca for home consumption, but not for general cultivation. Considers the Perkins a fine grape. Has one Delaware which has over 200 clusters on a space 4 by 8, four years planted. His Delawares are nearly all ripened.

Mr. Frost of Rochester—Has several varieties grown under the same circumstances. Hartford Prolific ripened several weeks ago and are nearly gone—Delaware is about ripe; Concord not quite ripe. Can depend upon, first, the Hartford Prolific, then the Delaware which is fully as productive as any other sort.

Mr. Townsend of Lockport, exhibited some bunches of Perkin's Grape, considerably resembling fine Dianas. They are early—rank next the Delaware in quality—fruit of uniform size.

C. W. Bissell of Rochester—Have had the Logan ripe 4 weeks since—fruit better than the Isabella—2 weeks earlier than Delaware—foliage did not burn much.

C. Downing of Newburgh—With me the foliage burns considerably.

Mr. Gamper of Penn., says he obtained some from Rochester, and found it the hardiest of any he has.

Mr. Bissell, in answer to several members who called upon him as to the Logan grapevine, replied that the Logan, in every instance where the vines had blossomed, had fully ripened its fruit in September in the open air. A very great advantage which this Logan vine possesses is, that as fast as the wood attains its full size during the summer, it also ripens perfectly, and is thus far prepared to perfectly withstand our New-York winters, and consequently to need no protection. It is best cultivated when trained to stakes, or else upon the "double spurred system" of pruning, and it thus bears profusely, and is certain to ripen its fruit with us in the open vineyard. The main thing in the cultivation is to get a good growth, and thus have a plenty of ripe wood each year, and you are sure of a good crop of grapes next year, ripened in September.—(*To be continued.*)

Deep Plowing.—A recent English writer makes the following sensible remarks on deep culture:—"That land may be injured by deep culture is a common but a very erroneous opinion. Plowing down good earth and up bad, and letting them remain in that position, must lessen fertility for a time, but that is not deep culture; it is literally exchanging good earth for bad, and is the reason why individuals declare that they have injured their land by deep plowing. Let the nature of the land be what it may, it can be raised to its greatest fertility only by a sufficiently deep pulverization and mixture of the ingredients. Where the subsoil is of good quality, and in many places it is better than the soil, bring it up at once to the surface. Where deep culture is judiciously executed, in no case does the new earth lessen or destroy the fertility of the old; on the contrary, they improve each other, & constitute a deeper and more productive soil.

Inquiries and Answers.

INQUIRIES.—1st. Does buckwheat injure land, if so, why?—2d. Do oats impoverish land, if so, why?—3d. Will birds carry foul seeds, such as thistle, carrot, and wild onion?—4th. Does peeling bark make less ashes?—5th. Which kind of oak is the best for bark for tanning purposes?—6th. Are seasoned posts more durable than green ones? v. [Our correspondent is aware that all grain crops exhaust land more or less—buckwheat moderately, and oats rather severely. We cannot give a distinct and specific reason, satisfactory to all. The vitality of the seeds mentioned would doubtless be destroyed when devoured by most birds. The bark of the oak produces more ashes than the wood, but a greater portion is insoluble—the difference in the value of the ashes is probably not great. Seasoned posts are more durable than green ones, especially if they have been cut in summer when the seasoning process is quickly performed. Posts set green are so long in drying, that partial decay or fermentation takes place before they can become dry, in the same way that winter-cut timber retains water so long as to produce a similar result. Seasoned posts, set over a drain, with clear gravel rammed about them to let down speedily the water that falls, will always remain dry, and will last very long.]

STOCKING ARTIFICIAL PONDS.—I wish information in stocking an artificial pond with fish for table use. Can you, or some of your many readers, advise me as to what kind or kinds to use, and how I should go about it? My pond has no running water. I have been told that in putting in several kinds they often prey upon one another. Should I not introduce some small fish which increase rapidly for food for the larger? My pond will contain something more than a quarter of an acre, and will be from 1 to 12 or more feet in depth. R. W. H. *Moorefield, Ky.* [We shall be pleased to hear from some of our readers, who have had experience in the business, in reply to the above.]

SOWS EATING THEIR PIGS.—If "N. E of Ohio," (Co. GENT. Oct. 3, p. 224,) had stated the treatment of his sows; whether they are confined in pens or run at large, and the food they receive, we could more certainly give a remedy for their unnatural voracity. Sows never eat their pigs when running at large with plenty of green food, but if confined and fed mostly on grain, they suffer severely from costiveness, and are apt to destroy their young on littering. If they must be confined, they should have a daily supply of green food in the shape of potatoes, sugar beets, carrots or parsnips, and in autumn green corn, pumpkins, squashes or apples. In summer, green clover, or corn fodder is good for swine in pens, of course in addition to their rations of grain. Sometimes sows refuse to own their young, acting perfectly indifferent to their fate. We have found this readily overcome by holding the sow and allowing the pigs to suck once—after which she will readily care for them herself. B.

STUMP MACHINE.—Can any of your readers furnish a plan of a real good stump machine—one that has been tried and proved by actual experience? H. W. HARGATE.
Merrittsville, Mich.

[For the Country Gentleman and Cultivator.]

Sheltering Peach Trees in Winter.

EDS. CO. GENT.—In yours of 19th inst., you have a short editorial headed, "Peaches every year." This is secured by "training the trees in such a manner that the branches may be bent down and buried with earth, similar to the well known mode of protecting tender grapes and raspberries." The feasibility of the thing is beyond question. I have a number of peach trees—bushy ones too, whose limbs come out near the ground; the lower limbs that get covered with snow, as some of them do every winter, blossom and bear every year, while not a blossom is seen above the "snow line." I have grown a few dozen peaches this year—some of them lying immediately on the ground, and not a peach more than two feet above the surface. If I had protected all branches that might have been safely bent down to the ground last fall, and confined them there by wooden hooks, and then covered them with branches of evergreeens or earth, I have no doubt I should have had a bushel or two, instead of a few dozen.

In connection with the above, I copy the following from the *Boston Daily Herald* of Sept. 21st, which says, "The heaviest yield of peaches in the eastern section of of the State the present season, was that of a tree owned by Mr. Elbridge Packard, at North Bridgewater, who raised twenty-four very fine specimens, on a limb which was covered with snow during nearly the whole of last winter." L. BARTLETT.
Warner, N. H., Sept. 27, 1861.

FOREIGN AGRICULTURAL ITEMS.

A recent report from the Registrar General of Scotland, on the mortality of the past year, shows how favorable the practice of agriculture is to the continuance of human life. In the eight great cities of the Kingdom the deaths were 286 during the year, out of 10,000. Out of the same number of people in the small cities there were 226 deaths, and the number was farther reduced in the "rural districts" to only 176—a very significant difference in their favor as compared with the large cities, and one of considerable importance as compared with the smaller towns.

— A French paper, *Le Courier du Bas Rhin*, informs us that the harvest time in that district was heralded by a proclamation from the local authority, offering a reward of a penny a dozen for the carcases of all field mice (*Campagnals*) killed and produced, and a hecatomb of 56,000 was piled up at the mayoralty of St. Hypolite after six days' slaughter.

— The Prussian Minister of Agriculture has offered a Prize of about $430, and a second prize of $215, for the best two essays on "Worms and Insects Injurious to Agriculture," to be written in German, and handed in at the Ministry of Agriculture at Berlin, before the first of July, 1864.

— "We chronicle all kinds of progress with satisfaction," writes BARRAL, in a paragraph which we translate for the COUNTRY GENTLEMAN from the Journal d'Agriculture Pratique,—"we like to render justice to every effort, and we regret often to see those devoted to it discouraged. Of this we have a sad example." It appears that Baron LIEBIG has published a letter in a late number of the Augsburg Gazette, in which he attacks violently, "not the ignorance of farmers, but the creation of institutions which are intended not only to spread among them knowledge already acquired, but also to achieve still farther steps in agricultural science. Liebig excommunicates at a single stroke, all the agricultural schools and stations so numerous in Germany, and to the labors of which we have so often called the attention of our readers. This celebrated chemist, to whom agricultural chemistry owes so much of progress, now declares that none of these institutions, the establishment of which has always been received with so great favor, can be of any real service. This attack from such a source has produced well founded surprise among these laborious observers, who justly thought they were filling a scientific mission of the highest order in applying themselves to the analysis of the natural phenomena of vegetation and of life, and they have replied with a violence of which we can form little idea in this country. We shall not repeat any of the high words that have been exchanged. But we can not refrain from saying that Liebig, as he owes no little of his renown to his labors in agricultural chemistry, should the less endeavor to discredit the labors of his compatriots who follow the path he pointed out. All is not yet said, nor done; and the agricultural stations of Germany have rendered services which it is unjust to ignore."

Agricultural Exhibitions of the Present Season.

There were many fears that our "Fairs" this "Fall"—to use two Americanisms in the same line—would suffer seriously from the distracted condition of our Public Interests. With that apprehension the managers of some Societies concluded to forego entirely the customary Autumn Meeting—others undertook with great hesitation the labor of carrying out the usual programme.

The Season of these Exhibitions is now nearly over, and we are enabled to look back upon it, and remark in general terms the results that have been achieved. "The great interest of the country, Agriculture, *was never more prosperous*," says the circular of a leading business firm in New-York, sent out last week to their English correspondents; and this statement is amply borne out by the support our farmers have in almost every case extended this year to their Society exhibitions. We hear of few instances of discouragement and failure—many of unexpected and sometimes of unprecedented success. Our columns have already contained notices of several local shows, nearly all of which received the usual degree of patronage. We were informed at Springfield by Mr. WILDER, Dr. LORING, Mr. ATWATER, and others who had attended a large number of County Exhibitions in Massachusetts, that the weather of the past six weeks had been almost everywhere propitious, the competition spirited, and the attendance large. The published reports in our exchanges corroborate the statement, and lead us to wish that our space would permit us to present many of these reports in our own columns. Judging from the Ohio papers, the Societies in that State have also done tolerably well, to say the least; and, as to New-York, except in here and there an instance of storms, we judge that these Farmers' holidays have seldom been more generally kept.

Aside from accounts furnished us by our correspondents, many of our friends have sent us notices of their Local Shows, premium awards, &c., as contained in the papers or published by the Societies. Some of these, which we intended to refer to, have been mislaid during the hurry and absences from home involved in the season of Fairs, and we must pass them by with this general acknowledgment. But out of those that remain there are two or three to which we must devote a more special degree of attention:

THE QUEENS CO. FAIR, the success of which we have already chronicled, did remarkably well, pecuniarily, for *a single day*. Friend HAROLD writes us under date of the 7th inst., that everything passed off pleasantly, although his labors were quite arduous and kept him at Flushing for several nights—so pleasantly, indeed, that "even the musquitos there had a most pleasant and musical tune" to his ears; "798 entries were made, $910.88 taken from 15 and 10 cent tickets, and about $830 for memberships, while the Flushing subscription was over $260, making an aggregate of more than $2,000." As the members' tickets admit a whole family, the receipts from this source, together with those from single tickets, prove that the attendance must have been many thousands of people. The Flushing Journal says that the money taken in "exceeds by more than a third the greatest amount ever before received," which certainly is not bad for a war year.

The COLUMBIA CO. Agricultural and Horticultural Association held their show at Hudson, Oct. 1st, 2d and 3d. We hear verbally that it was in all respects very successful, with receipts of nearly $4000!! Our friends in that neighborhood should give us fuller particulars—they may have some claim to rank financially at last, as the "banner county."

THE SUSQUEHANNA VALLEY Ag. Society held its Fair at Unadilla, Oct. 1 and 2. The Unadilla Times says that "the display was large and highly creditable in all the departments, to the genius, skill, and productive capacity of the farmers of the Susquehanna Valley, while the number of people in attendance could not have been less than 5,000."

To go out of this State, the FRANKLIN CO., MASS., Exhibition at Greenfield the last week of September, evinces some very gratifying results. The Gazette & Courier pronounces it "the most successful show ever held by the Society;" the Springfield Republican, as a single instance of success, says that "four years ago, at the fair of this society, there were only 8 entries of sheep, and only 23 sheep on exhibition. This year there were between 50 and 60 entries, and over 300 sheep, mostly coarse and middling wool varieties, of the large breeds, for mutton." This progress in sheep growing, together with much improvement in swine, and in other respects, are justly ascribed to the efforts of the Secretary, Mr. GRENNELL, who was hard at work during the show, says the Northampton Free Press, "dressed in sheep's gray, the product of his own flock, and manufactured into cloth by Field & Hubbard of Leverett."

The ATHOL, HOLDEN and other Town Exhibitions in Massachusetts are also noted as successful.

From Pennsylvania we receive good accounts of the MONTGOMERY and BUCKS County Fairs, as very creditable to the fine agricultural districts which they represent.

A friend who was present at the PROVINCIAL EXHIBITION of Canada West, at London, characterizes it in a private letter, as the best he has ever attended—"the show of stock very large and of excellent quality." We receive full accounts also in the London Free Press and the Toronto Globe. The annual general meeting of the officers of the Association and the delegates from the various County Societies and Mechanic's Institutes, took place on Friday morning, in the large tent, the President H. C. BARWICK, Esq., in the Chair. FRED. WM. STONE, Esq., of Guelph, the 1st Vice-President, was elected President for the ensuing year, by a unanimous vote. Asa A. Burnham, Esq., of Cobourg, the 2nd Vice-President, was also unanimously elected 1st Vice-President, and J. Johnson, of London, for 2d Vice-President. It was decided to hold the next exhibition at Toronto, after which the retiring President delivered his Address, and the meeting adjourned.

[For the Country Gentleman and Cultivator.]

Pickling Cucumbers.

I notice an inquiry in one of the late numbers of the Co. GENT., for a receipt for laying down cucumbers, and although too late for this year's crop, I will give you one which I follow with good success. For a barrel of pickles, 3 gallons molasses, 3 gallons rainwater, and 2 gallons whiskey. In three weeks they will be eatable and continue good until next harvest. H. W. HARGATE.

St. Clair Co., Michigan.

☞ The Demand Notes of the United States, whether payable in New York or elsewhere, will be gladly received at this office in payment for Subscriptions or Advertising. Our distant friends are urged to remit them to us in preference to any Bank Notes but those of our own and the New England States.

THE CULTIVATOR.

ALBANY, N. Y., NOVEMBER, 1861.

☞ A successful experiment in Draining was mentioned to us lately by Judge SACKET of Seneca Falls. He has a home farm of 700 acres under his supervision, although partially occupied by tenants, and has settled upon hereafter putting down an average of 10,000 tile per year upon it. In a sixty acre lot there were six or seven acres "so wet and sour" that the crop on them was always a partial or total failure. He put an open ditch through this, with a drain of 100 rods in length, of 5 inch tile, leading into the head of it, with branch drains of 3 inch tile on either side. The next year the whole was in wheat; "all the dry, good land," which before had far exceeded in yield the wet parts of the field, gave a product of about 20 bushels per acre, while *the portion just underdrained yielded full forty bushels per acre*—difference enough "very nearly, if not quite, to pay for the whole expense incurred. That draining, added the judge, "is a wonderful thing."

Judge S. has a "kink" in laying drains worth mentioning. Instead of bringing a side drain *directly into* the main, he carries it *side by side with the main for a rod or two;* in this way the water passes from one to the other through the joints of many lengths of tile as they lay in close contact, and any deposit that may exist is strained out, so to speak, or at least has considerable room to be got rid of in, instead of lodging directly at the entrance of the side into the main, with the eddy that may be formed by the influx of one stream into the other.

— We took the liberty of asking Judge SACKET'S opinion on the question of the wheat producing capacities of this State—"the longer we work our lands," he answered, the better they grow, and the better the production we get." He thought over his experience for many years past, and had no hesitation in asserting that—excepting years when the wheat crop has been destroyed by the midge—*the wheat lands of western New-York have been constantly becoming more productive.* He stated that his brother, ORANGE SACKET, Esq., whose farm is across the river, about a mile from Avon, in Genesee Co., *has averaged thirty-four bushels of wheat per acre each year for twenty years past*, and that his crop has been an improving one from year to year, instead of showing any symptoms of falling off. It is an interesting instance of a remarkably favorable year, to add that this farm, which is about 600 acres in extent, one season produced 6,000 bushels of wheat upon 154 acres, (39 bushels per acre;) a crop which fortunately came in at a time when wheat sold for $2.25 per bushel, and which therefore brought over $13,000!

Judge Sacket's 700 acres at home are this year employed about as follows, in round numbers:

In Wheat,	100 acres.	In Oats,	70 acres.
In Hay,	200 do.	In Barley,	35 do.
In Pasture,	100 do.	In Corn,	35 do.

Fallow for Wheat crop 1862, ... 160 acres.

In 1859 he had a hundred acres of wheat averaging a yield of 30 bushels per acre; in 1860 he had 160 acres, which produced 3,270 bushels, or about 20 bushels per acre; in 1861 he never knew the prospect finer than it was when the snow first went off the ground (and he said, parenthetically, that he "never raised a good crop of wheat *unless it came up well* at first,") but the disastrous frost of March cut it off so that his crop this year was only about eight hundred bushels on the 100 acres—55 acres only averaging about 3 bushels per acre. This is an instance of a poor crop from reasons which it was impossible for human foresight to remedy or guard against.

"L'amelioration des campagnes est encore plus utile que la transformation des villes."

So writes NAPOLEON III., in a letter under date of Aug. 13th last, to the French Minister of the Interior—"The improvement of the country is a labor of still greater utility than the re-modeling of cities."

That this is not merely intended as a rhetorical period, is shown by the measure which this letter serves to announce, viz., the grant of 25,000,000 of francs (say $5,000,000) for the improvement and extension of COUNTRY ROADS. "It does not suffice," says the Emperor, "to reclaim and make productive vast extents of territory, to labor for the bringing into value of communal properties and the replanting to wood of mountain lands, to organize exhibitions and multiply societies—we must, above all, prosecute with vigor the completion of parish roads, as the greatest service we can now render to agriculture." The task has therefore been determined on and undertaken—at the cost above specified, and to extend over a period of seven or eight years before the plans now laid out can be accomplished—of improving, extending and completing the means of general internal intercommunication, such as the highways which connect villages and *communes*, or give them access to the imperial and departmental routes already existing, and to railway lines.

We have not referred to this subject, however, with the view of quoting the interesting figures which might be given as to the labor and money already expended upon French roads, but in order to illustrate, in this new and large appropriation from the Imperial treasury, the importance ascribed by a government having at heart the agricultural prosperity of its people, to the existence among them of good roads for the transport of products of the soil and the implements of its culture. One would expect to find greater solicitude on such a question among a people who, like Americans, are their own monarchs—than on the part of an Emperor, full of schemes for military achievement, and mainly bent, as has been supposed, upon adding, at any cost, to the architectural, scientific and recreative attractions of his capital.

But we very much need to take a lesson, in this democratic empire, from Napoleon, or from some other source, as to the attention paid to our roads. To ameliorate their present condition to that degree of excellence which every traveller remarks in the highways of Great Britain and upon many parts of the Continent, would be a benefit which we probably should not very much exaggerate in pronouncing it, in the Emperor's language, "the greatest service yet to be performed for our agriculture." When will our farmers (and perhaps we should add our legislators) learn to appreciate its importance?

☞ The prospects of the English Wheat Crop of the present year, instead of appearing to brighten as harvest returns come in, seem to look darker from week to week. The Mark Lane Express of Sept. 9 says: "The further we go into the Wheat crop, the more certainly it appears that the yield is short;—notwithstanding the general fineness of the quality and heavy weight. We have heard of parcels, sold in the expectation of a delivery of 3 to 4 qrs. per acre, turning out only a fraction over 2 qrs. ½ bush. There are more only yielding 3 qrs.; and some are still taken at 4 qrs. This, after such a deficient harvest as the last, which with the help of unprecedented imports, left almost nothing for mixing, being followed by the extraordinary claims of France, have placed our markets in a position very unexpected by Town millers. This is shown by their recent reduction in the price of Flour, while the country generally shows a rise, just as the wheat is secured, of 2*s.* per qr., with the tendency still upward, and the French eager purchasers."

We have already referred to the mediocrity of the wheat crop in France, and notice that a correspondent of the London Review says "it is one of the very worst the country has suffered from for a long time." The New-

York Evening Post of Saturday night last states that "French buyers have almost controlled prices in this market for some time past, their orders having been on a very extensive scale," and that, owing mainly to this French demand, the sales of grain on the New-York Corn Exchange the day before (Sept. 27th) reached the heavy aggregate of three-quarters of a million bushels. Pretty fair *for one day's business!*

THE ADIRONDAC GRAPE.—We have received from our friend, Mr. JOHN W. BAILEY of Plattsburgh, a sample of his new grape, "the Adirondac," which he discovered growing at the foot of the Adirondac some years since. In a note accompanying the grapes, Mr. Bailey says:

"I send you an inferior sample of the *Adirondac*. The vine was layered this season, and two or three bunches of natural shape and form were produced, which have been disposed of. They usually grow about the size of the Isabella, but more the *form* of the Diana—quite compact and slightly shouldered. When it ripened this season, 17th Sept., the Isabella had not changed color in the least; the Delaware and Concord had just commenced changing color. This sample is deficient of its usual flavor. Last season they were ripe about two weeks earlier. This sample was picked last Thursday. I send a a small bunch of each, the Isabella and Concord, for comparison. The Adirondac has produced fruit for five or six years, and ripens from 5th to 20th Sept., or two weeks before any other."

Samples of the Adirondac were shown at the late exhibition of the Montreal Hort. Society, where they attracted much attention and commendation. A grape that will ripen ten or fifteen days earlier than the Delaware and Concord, even if only of tolerably fair quality, cannot fail to prove a valuable acquisition to the northern part of our country.

☞ We learn that R. A. ALEXANDER, Esq., of Woodburn Farm, Woodford Co., Ky., with whose extensive herd of Short-Horns our readers are already many of them quite familiar, has recently shipped to "Airdrie House," his estate in Scotland, several very valuable animals—among them, we believe, the following:

BULLS—Name.	Calved.	Sire.	Dam.
Albion.	Mar. 14, 1856.	Grand Turk.	Frances Fairfax.
2d Duke of Airdrie.	Sept. 18, 1856.	El Hakim.	Duchess of Athole.

Also three or four cows and heifers, like the foregoing, of the choicest character and pedigrees. Mr. ALEXANDER'S name is therefore to be put down on the list of European *exporters*, as well as importers, of Short-Horns, and we should not be surprised to hear of his following the present shipment with others. We can but express our regret that some of our best animals are thus being lost to the country, although at the same time glad to know that they are going where they cannot fail of due appreciation.

☞ The Vermont State Fair, held at Rutland, Sept. 10–13, appears to have been tolerably successful; the weather was not favorable, but "the show," writes the Secretary, "was in some departments fully up to those of former years, and in others it was more or less meagre. The number of horses on exhibition was less than two-thirds the average for the past ten years, and the general quality of those exhibited was proportionately reduced. In explanation of this fact it is said by those who are competent to express an opinion in the matter that there is now a smaller number of valuable horses in Vermont than in any former year since the State Society was first organized. Good horses have been raised in the State every year, but they have been exported until but comparatively few are left. This is more particularly true of the Black Hawks than of the other branches of Morgan horses. The exhibition of cattle was large and fine, especially in the department of thorough-bred stock. Several fine herds of Durham cattle were brought, and single animals from other herds were numerous. There was but one considerable herd of Devons. The number of grade cattle was large, and many of the animals were superior in form and quality. The show of sheep was not interior. The number of entries was nearly up to the usual standard, and the animals were of a quality that convinces us that our sheep breeders do not contemplate any retrogade movement. Butter, Cheese, and Maple Sugar, were all largely represented by excellent specimens; but in the remaining departments, including Mechanics' and Floral Halls, the show was very barren." The receipts will very nearly cover the Premium List and Expenses.

OHIO STATE FAIR.—An account of this Fair appears in the last Ohio Farmer, which concludes as follows: "Taking everything into consideration, it has proved a successful one, and leaves the Board in a better condition than before. The people of Dayton did all in their power to make their visitors happy; and it is seldom we have spent a more pleasant time than during the two weeks of our visit. Long may their city flourish, and may they increase in basket and store."

☞ The following Commission has been appointed by the President to represent the Interests of American Exhibitors at the Exhibition of the Industry of All Nations, to be held in the city of London, in 1862:—Wm. H. Seward, Secretary of State; Caleb B. Smith, Secretary of Interior; Edward Everett of Massachusetts; Joseph Henry of the Smithsonian Institution; Robert B. Minturn of New-York; J. Dawson Coleman of Pennsylvania; John H. Klippart of Ohio; James R. Partridge of Maryland; B. P. Johnson of New-York; Richard Wallach, Mayor of Washington; W. W. Seaton of Washington; Joseph C. G. Kennedy, Superintendent of the Census Bureau.

A PRODUCTIVE NORTHERN SPY.—Wm. H. Potter of Batavia, recently informed us that ten years ago he grafted an apple tree, then about the size of one's wrist, with the Northern Spy. Last year it bore four barrels of fruit. A tree on our own grounds in one instance proved nearly as productive. A young tree about the usual size for setting out was transplanted into a soil made rich by finely intermixing old manure, but too remote for the roots to reach it until the second year. The tree grew finely, and bore eight bushels the nineth year. The Spy is long in coming into bearing, but afterwards the product compensates for the delay.

THE MICHIGAN STATE FAIR—This Fair was held at Detroit the last week in September, and was, under all the unfavorable circumstances, quite as successful as could have been expected. The number of entries was about 1,500, and the receipts $6000. During the Fair the officers for next year were elected as follows:

President—J. B. CRIPPEN of Coldwater.
Treasurer—B. Follett of Ypsilanti.
Secretary—R. F. Johstone of Detroit.
Members of Executive Committee—H. Lyon of Plymouth, W. J. Baxter of Hillsdale, B. Dewey of Flint, E. S. Moore of Three Rivers, Solomon S. Bailey of Grand Rapids, A. S. Welch of Ypsilanti, Ira H. Butterfield of Macomb, and in place of J. J. Newell, resigned, A. S. Berry of Adrian.

POTATOES ON THE STALKS.—I have this summer for the first time noticed the same "freak of nature" mentioned by Dr. COLE, while digging my early potatoes, and upon a number of hills. Some of the bulbs were quite large, of a deep purple color, and were not confined to the axillæ of the leaves, but grew along the stalks instead of leaves, small leaf-buds being partly developed from the eyes of the bulbs. I had three varieties planted, but this occurred only on one kind known as the "Mexican." It is new to my neighbors as well as to myself. May it not indicate a different mode of hilling for the varieties on which it occurs. J. M. H. *Coudersport, Pa.*

☞ At the late Show of the Massachusetts Horticultural Society, A. D. Webber of West Needham, exhibited six squashes *produced from one seed*, the aggregate weight of which was 695½ lbs.

☞ We lately had the opportunity, as intimated last week, of looking over the beautiful DEVON HERD of EDW. G. FAILE, Esq., a part of which is now at the farm of his son at White Plains, and the remainder, as heretofore, at West Farms. It still manifests the same careful attention and skillful breeding which have rendered its representatives prominent whenever they have appeared at our chief Agricultural Shows; some of the imported cows are not yet beyond the age of bearing, while the part of the herd now in its prime, both male and female, mainly consists of home-bred animals, and, like the generation of "young things" following in their wake, includes many to which we might point with pride, as illustrative both of the adaptedness of the breed for useful purposes here, and of the full maintenance of its excellencies in American hands. One of these, the three-year-old bull "Cayuga," we cannot refrain from alluding to individually; sired by Tecumseh, a calf of Frank Quartley's out of Ada, both imported from the Quartley herd, his dam was Bowley, purchased from Mr. Turner, so that he runs back to the best sources on each side—an ancestry to which he does full justice; and although now only in ordinary condition, or perhaps scarcely that, as Westchester pastures have been a little pinched during a dry autumn, manifests in all respects a gratifying development of those merits which won him first prizes, as a calf at our Syracuse State Fair in '58, and as a yearling at Albany in '59.

At Mr. FAILE'S farm the buildings are all for practical purposes, and might be imitated in some respects to advantage by any farmer. In their construction the most important points, such as cleanliness and ventilation, were fully borne in mind, without, in these or other respects, the outlay of any unusual or unnecessary degree of expenditure. The matter of ventilation, for example, is attended to in a very simple way, which if elsewhere practised has never before particularly attracted our attention: the windows of the stables are protected by vertical slats upon the outside perhaps two or three inches wide; an interior frame, having slats of a corresponding width, is made to slide backward and forward just far enough for its apertures either to coincide with those of the outer slats, leaving the spaces all open, or with the slats themselves as far as may be desired to lessen or entirely shut off the admission of the air. In this way, and by placing the windows so that the draught shall not come directly upon the animals themselves, in the very coldest weather there may be enough air admitted for complete ventilation without affecting their comfort; and there is room in warmer weather for a large circulation, without the expense and annoyance of shutters or sash, with neither of which can the amount of air admitted be so easily or perfectly regulated.

At the White Plains farm, of about 300 acres, which only came into the possession of Mr. SAMUEL FAILE about eighteen months ago, being then in a very dilapidated condition, great improvements have been undertaken; the whole re-laid out, much new stone wall erected, a large quantity of tile well put in, generous dressings of bone dust and other manures applied, and deeper plowing carried on, until already renewed evidences of its natural fertility are making themselves manifest, and high promise afforded as to future results. A field of rye presenting a finer appearance than any other Autumn sown grain we have yet seen, is an example,—the only fear being that it may be showing too great luxuriance for so early in the season. The land lies high and most admirably for the use of machinery in farming, and the site is in other respects both advantageous and pleasant. Few better localities could be selected to show the advantages of *good farming*, and what improved methods *can accomplish*; and few which at the same time would afford to a young beginner more encouragement in making the trial.

We had also the pleasure of looking over the beautiful grounds of THOMAS RICHARDSON, Esq., but just at dusk, so that his fine collection of evergreens and extensive range of glass, covering a large and valuable collection of ferns among other rarities, could only be imperfectly enjoyed. By lantern we also scrutinized four or five Alderneys, which were only received from across the water a few days before. We shall some time hope to enable our readers to share with us the pleasure of a daylight examination of Mr. R.'s favorites among both plants and animals; we presume there are but one or two "amateurs" in the United States, whose collections, in the department of evergreens for instance, are equally full and interesting, and we have not a great many examples of ornamental gardening carried to so high a degree of perfection on so large a scale. Mr. R. is also interested in practical agriculture, but his farm is situated near Burlington, N. J.

☞ THE ANNUAL REGISTER OF RURAL AFFAIRS for 1862, which has been for some weeks advertised in our columns, will be ready to send out early next week. The general character of its contents and the extent to which it is illustrated, will appear from the Advertisement alluded to; and we may add that in both respects, it is at least equal in value and interest to any number that has preceded it.

The low price at which it is sent by mail *per dozen*, is such as to remunerate any one quite liberally for the sale of this quantity, and we know of no way in which so much useful reading, accompanied by so many engravings, can be had by the farmer for *Twenty-five Cents*, as by the purchase of a single copy.

Any or all of the seven previous numbers of the ANNUAL REGISTER may at any time be procured. Those enclosing a remittance will be particular *to mention the year required*, as mistakes frequently occur from orders naming the wrong year—it is the number for **1862**, it will be remembered, which is now coming out. Postage stamps may be sent for change.

PRICE OF THE ANNUAL REGISTER FOR 1862.

SINGLE COPY, post paid,	25 cents.
FIVE COPIES, do.	$1.00
ONE DOZEN, do.	2.00
ONE HUNDRED, per Express,	15.00
COMPLETE SETS, Eight Nos., post paid,	1.60
TWO COMPLETE SETS, do.	3.00
THREE do. do.	4.00

☞ The great HEREFORD SALE at Cronkhill, as we learn from our English exchanges, resulted as follows:

First day, 104 head old and young, sold for,	£2,959 17s.
Second day, 42 heifers,	1,018
34 bulls,	1,353

Being an aggregate for 180 head, in round numbers, of about $26,800, and an average of not quite $150 per head all around—about $135 per head for females, and about $195 per head for males. The highest prices paid were 100 guineas for the bull "Retribution" and 70 guineas for the bull "Canning" both to go to Australia. Several head were purchased for FRED. WM. STONE, Esq., of Canada West, who was the only purchaser whose name we find as coming from this side of the Atlantic; his purchases were Jenny, for 26 gs.; Agatha, 30 gs.; Graceful, 23 gs.; Wildrose and Sweetheart, heifers, at 40 gs. each, and the bull Sailor at 20 gs. Among other purchasers, were Col. Hood for the Windsor farms of Prince Albert, and many prominent land owners and occupants of the neighborhood. The prices are probably all that could have been hoped, on so large a sale, while they are very possibly below the standard of value at which the late Lord BERWICK would in many instances have rated the individual members of the herd.

The sale also included a flock of about 600 sheep, chiefly Shropshires—about one-half breeding ewes; "a lot of handsome white Berkshire pigs;" some dairy cows and heifers, and half-a-dozen Bretonne cattle.

☞ Our friends will please not send us Postage Stamps of the old emission, as the time for exchanging them for the new issue has expired, and they are, to us, worthless.

[For the Country Gentleman and Cultivator.]

A TAPE LINE IN THE CORN FIELDS.

Messrs. Editors—How is your corn, says one—How is your corn, says another. Now in the first place I am but a two-year old farmer, and do many things differently from my neighbors. This year I *planted* and *cultivated exclusively* with the Gage cultivator and two horses. Hence my corn is all in drills, unlike my neighbor's, and hence the peculiar significance of the question, "How is your corn?"

I was in much doubt whether to plant in drills or hills. Most of my counsellors advised the latter, but the why and wherefore, no one knew. I adopted drills, as I believed I could thereby give greater room for the roots of the corn and more air and light to the tops, and, with the Gage, plant it and work it with less expense than in hills. The great argument in favor of hills seemed to be with all, that the corn would *ear* better, give more ears, and was more easily cultivated.

Now the question is of so much importance, that I am anxious for more light, and will communicate a few facts bearing upon it.

I wish to vary the question a little from the general one of, which method will yield the most corn by usual cultivation? I wish to know by which method there is the *greatest tendency* to ear, or *set* for ears. To raise the corn I feel quite sure that we must give the plant plenty of food, air and light, which on different soils may be done by different means.

I wish first to be able to produce the greatest number of sets or offers to ear.

I think that I must, for this end, give the plant the highest condition of health and vigor, without reference to its proximity to other plants, or even to its light and air, for my fodder corn, having half a dozen stalks to the foot or more, 2½ feet apart and 9 to 12 feet high, is very much of it well set for ears and much of it has good ears upon it. Also the heaviest corn I have, has the most ears upon it as well as the largest ears, although it has the *least* air and light.

This would seem to show that strong land, bearing heavy stalks, might be planted closer than poor land. Can that be so?

Anxious to be able to answer the question of, How is your corn, which I could not do without comparing it with other fields, and to get facts to bear on the question of drills versus hills, I took my tape line and went into the fields. Making the ring fast to a corn stalk, I counted the ears which I thought would have corn on them on each spear, and also the silks or failures, too small to make even a good nubbin, for a distance of 33 feet in each case.

The trials were made in what appeared the best portions of the field, and also in the average, but none on the very poorest spots. The smallest of these results would be nearer the true average for the fields than the highest, with the exception of No. 12, which is below the average of the field. The drilled corn was, especially where the largest corn appears, dropped full thick, and failing to germinate, vacancies 2 to 5 feet occur, and other places are quite thick.

[The tabular statement here given by our correspondent, we are compelled to omit from the difficulty of arranging it in type, but we give his conclusions which will show the general results.]

We may note from the table that on the whole there is about one ear to each spear, whether there be 50 spears in 33 feet, as in drills, or 37 as in hills, which is about 4 spears to the hill. The Improved King Philip, however, overruns, giving 63 ears to 42 spears.

The drill system gives 50 spears, where the hill system gives 37, and 50 ears to 36 in the hills—all for 33 feet.

It further appears that in the hills, the whole number of ears and silks do not equal the ears alone of the drills, so that were the plants in the hills fed ever so well they could not have equalled the drills if every silk had filled an ear. They wanted more sets and greater vigor and strength when young, which they might have had in drills as well as hills. The remedy therefore, seems to me to be more manure instead of more room.

I should further state that the corn cultivated in drills by horse power, is at least one-fourth heavier both in ear and stalk, than that cultivated by hand, rendering it still more remarkable that it is so well eared.

The common corn is the same variety of seed. I obtained it from my neighbors 2 years ago. The ears of the drilled corn appear much larger, but the harvest may show that they are not so well filled.

I attribute the increased tendency of the drilled corn to ear, to subsoiling and manure; therefore I shall, if confirmed in the theory, plant my corn next year alternately with carrots or roots, very thick—6 rows of corn, 4 rows of roots. Then thin out the corn for my cows by a cart which will pass through the drills of roots, 2½ feet apart, without injury to them. The great trouble in thinning out corn for feed, is for a man to get through heavy corn with facility with his back-load and the distance to carry it. But I am satisfied that 1 acre of land will yield 8 to 10 tons of green fodder, cut off before filling, and then give a good crop of corn. S. W. Hall.

Elmira, N. Y., August 31.

BEST WAY OF SELLING PORK.

"After hogs are butchered, is it best to sell them as they are, or pack them?" Hiram Olmstead of Walton, Delaware Co., in an Essay on "Practical Farming as Connected with the Butter Dairy," asks and answers this question as follows:

"Assuming that pork is worth $7 per hundred, in hog, and $19 per barrel—hams will bring 12½ cents, shoulders, 10 cents, and lard 12½ cents. Every ten pounds of pork packed, will weigh out eleven after it is salted. Hams and shoulders will fall short after they are smoked, about one-eighth. Cut up the hog in the following manner. Split the hog through the back bone, take out the lard, cut off the head, cut out the hams and shoulders, and cut the side meat into strips, the way the ribs run through the back bone. One hundred and eighty-five pounds of side meat will make a barrel of mess pork, and will weigh out after it is salted over 200 pounds. Dissolve salt-petre and bathe the hams and shoulders, and rub on all the fine salt that will stick to them, and keep them covered with salt two weeks. If large, they will want to lay three weeks. Wash off the salt, and smoke. The coarse meat will be the legs, head and the rib, on the inside of the shoulder. At the prices named we will see what four hogs, weighing fifteen hundred, will come to:

5 barrels pork,	185 lbs. each,	925 lbs.,	at $19.00	per bbl.		$95.00
100 pounds lard, less 5 lbs.,	95	do.	12½	per lb.		11.87
200 do. ham, less ⅛ lb.,	175	do.	12½	do.		21 88
144 do. shoulders, less ⅛,	126	do.	10	do.		12.60
131 do. coarse meat, at 2½,						3.27
						$144.62
Less five packing barrels at $1.12..					$5.62	
Less four bushels salt and saltpeter, .					3.50	
						9.12
Value of 1,500 lbs. pork. packed,						$135.50
Value of 1,500 lbs. sold, at $7						105.00
Profit for packing						$30.50

The value of the pork at these prices is nine cents per pound, after it is packed."

A California Bee Story Endorsed.—The London Field copies from the Country Gentleman the recent statement, (see page 127 of this vol.) from H. Hamilton of California, headed "Great Yield of Honey," and remarks:—"The rapid increase of swarms is not altogether without a parallel, as a corresponding rate of increase has been obtained in some parts of New-Zealand and Australia. It is obvious that without the advantage attending the use of moveable frame hives, the bees could not have been deprived of their surplus stores with the same degree of certainty and ease as must have been necessary to ensure so large a harvest."

PAGINATION INCORRECT

THE CULTIVATOR FOR 1862.

FIFTY CENTS A YEAR.

NEW INDUCEMENTS FOR NEW SUBSCRIBERS.

Please Attend Early to the Formation of Clubs.

In order to secure the co-operation of our friends in extending the circulation of THE CULTIVATOR for 1862, at a sufficiently early period to secure a large list to begin the New Year with—we propose to send the remaining Numbers of the present volume to all new subscribers whose subscriptions are received before its expiration. Thus subscriptions for 1862 received before the issue of our next number, will receive the November and December numbers of 1861 in addition to the coming volume complete—making

Fourteen Months in a Year!

And subscriptions received during December previous to the issue of the January number will have THIRTEEN MONTHS IN THEIR YEAR. We have also determined to offer THE CULTIVATOR by itself as follows:—

Eight Copies for Three Dollars.

To the person making up a club of Eight at this rate, a copy of the ANNUAL REGISTER for 1862 will be sent as a PREMIUM.

The Cultivator and Annual Register

will be clubbed together as heretofore at the following rates:

ONE COPY OF CULTIVATOR AND REGISTER for 1862, SEVENTY-FIVE CENTS. TEN COPIES OF EACH, FIVE DOLLARS.

☞ To the person making up a Club of Ten at this rate, a copy of both the CULTIVATOR and ANNUAL REGISTER for 1862 will be sent as a PREMIUM.

The reader is referred to page 338 of this number of THE CULTIVATOR for an advertisement of the ANNUAL REGISTER for 1862, which will be ready to send to all subscribers entitled to receive it as fast as the clubs are filled up. It sells by itself for 25 cents per copy, or Two Dollars per dozen, at which rates we prepay the postage. The character of the coming number, both for the value and variety of its contents, and the profusion and beauty of its illustrations, is equal if not superior to that of any preceding one.

Remember then, if you please, that the Cultivator for 1862 may be had in Clubs of Eight at Thirty-Seven and a Half Cents per Copy; and the Cultivator and Register in Clubs of Ten at Fifty Cents per copy for both; and that all new Subscribers received during the coming two months will receive one, or two extra papers!

Old subscribers who renew will also be entitled to an equal number of extra papers, if they will, after perusing them be so kind as to distribute them among those who will be likely to subscribe for 1862. Numbers of either the CULTIVATOR or COUNTRY GENTLEMAN, as they may prefer, will be furnished for this purpose.

SUBSCRIBERS IN THE BRITISH PROVINCES will add to the foregoing terms Six Cents for each copy of THE CULTIVATOR ordered, to pay American Postage to the lines.

☞ Please send for Specimen Numbers.

☞ Say a kind word for THE CULTIVATOR among your neighbors.

THE PRESENT AND COMING VOLUMES.

We may refer with no little pride to the character of the Current Volume, which, so far from any abatement of interest from the 27 which have preceded it, only seems to grow more and more rich and fruitful with increasing years. We shall use our utmost endeavors to sustain and advance the leading position it has always occupied as the BEST OF AMERICAN AGRICULTURAL JOURNALS AT ITS PRICE.

The Number of its Practical Correspondents in nearly every State in the Union, was never greater, if so great, as at this time.

The Editorial Labor bestowed upon its columns increases every year.

It should be read by Hundreds of Farmers in every County and Town.

Large Clubs can be made up with little effort, if our friends BEGIN EARLY and are determined to succeed.

Prospectuses will soon be issued.

LUTHER TUCKER & SON,
October 1, 1861. Albany, N. Y.

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